

**Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554**

In the Matter of)	
)	
Updating Part 1 Competitive Bidding Rules)	WT Docket No. 14-170
)	
Expanding the Economic and Innovation Opportunities of Spectrum Through Incentive Auctions)	GN Docket No. 12-268
)	
Petition of DIRECTV Group, Inc. and EchoStar LLC for Expedited Rule Making to Amend Section 1.2105(a)(2)(xi) and 1.2106(a) of the Commission's Rules and/or for Interim Conditional Waiver)	RM-11395
)	
Implementation of the Commercial Spectrum Enhancement Act and Modernization of the Commission's Competitive Bidding Rules and Procedures)	WT Docket No. 05-211
)	
To: The Commission		

**COMMENTS IN RESPONSE TO PUBLIC NOTICE REQUEST FOR FURTHER
COMMENT ON ISSUES RELATED TO COMPETITIVE BIDDING PROCEDURES**

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SUMMARY

The April 17, 2015 Public Notice in this proceeding (“DE PN”) seeks further comment on a variety of issues and proposals relating to the Commission’s longstanding Designated Entity (“DE”) program, designed and implemented by the FCC over the last two decades to help ensure that wireless spectrum auctions fulfill the mandates of Section 309(j) of the Communications Act to widely disseminate licenses, promote competition, avoid the excessive concentration of licenses, and equitably distribute licenses and services among geographic areas (the “Statutory Mandates”).

The DE PN correctly establishes that the FCC will assess proposals for change advanced in this proceeding pursuant to a fact-based and data-driven burden of proof. Pursuant to this test, which is grounded in ample precedent, the Commission will disregard bare proposals for rule revisions that are bereft of support in fact or data. The Commission will also review each such proposal to determine whether it is consistent with the Statutory Mandates.

In satisfaction of these key tests, Council Tree Investors, Inc. (“CTI”) herein provides a wealth of facts and data, consonant with the Statutory Mandates, which demonstrate the following:

- Congress and the FCC put the Statutory Mandates in place through the *bi-partisan* adoption and implementation of Section 309(j).
- Congress and the Commission have long envisioned that DEs, properly structured as small businesses pursuant to well-established FCC control and attribution standards, should be able to attract the large investors necessary for them to participate in spectrum auctions on a substantial enough scale to fulfill the Statutory Mandates. Today, a very important way that vision is fulfilled is through bidding credits awarded to DEs that have attracted the investment

capital necessary to give them an opportunity to compete as new entrants against large incumbents in the wireless marketplace.

- The history of the DE program illustrates that DE alliances between small businesses and large investors have long played an important role in spectrum auctions. Over the last two decades, there have been numerous such alliances, and the participants comprise a veritable “who’s who” of the wireless industry. For example, Verizon, AT&T, Sprint, T-Mobile, and U.S. Cellular have all contributed their resources to alliances with DEs in the past. Large incumbents’ criticisms of DEs that bid actively in the recent AWS-3 auction and made that auction the most competitive and successful in FCC history conveniently and tellingly ignore not only their past participation in, and their benefit from, the DE program, but also the simple fact that DEs are only able to bid for licenses to serve large, regional or national markets if they have large dollar amounts to bid.

- Arguments that bidding credits somehow disserve taxpayers are both inconsistent with the mandate of Section 309(j)(7) that the FCC not base its auction rules on the “expectation of Federal revenues” and incorrect. The well-known Bidder Effect (each additional viable bidder generates additional auction revenue) was very much in play in Auction 97, with viable DE participation driving that auction’s revenue to surprising record levels. The Bidder Effect also will govern the results of the upcoming Broadcast Incentive Auction (“BIA”), as a 2013 expert study commissioned by Verizon Wireless and AT&T concludes. According to the logic of that study, unfounded changes to the DE program will reduce bidder competition in the BIA, and jeopardize that auction’s financial success. CTI also submits with these Comments multiple Bidder Effect analyses cogently illustrating how critically important viable DE participation not only was to Auction 97, but *will be* to the BIA.

- The more than thirty proposals put forth for comment in the DE PN (e.g., capping the size of bidding credits, creating new attribution rules for large investors in DEs, imposing unique buildout rules on DEs) are variations on a theme, proposing predictable and transparent ways to effectively preclude large dollar DE bids at auction and preserve the status quo in the highly concentrated wireless marketplace. These proposals lack support in data and fact, and their proponents fail to even attempt to harmonize them with the Statutory Mandates, Commission precedent, or the public interest. Commission adoption of any of these proposals to restrict the size and impact of DEs in spectrum auctions would only serve the *private* financial interests of the largest, most entrenched incumbents in this country, in clear contravention of the Statutory Mandates, and to the substantial detriment of the United States taxpayer and consumer (i.e., the *public* interest). Claims to the contrary notwithstanding, there can by definition be no “unjust enrichment” when a properly structured DE claims an auction bidding credit in order to win spectrum that is subject to rules unique to DEs and thereby take a *chance* on building a viable new wireless business in order to bring competition to a wireless industry dominated by the massive incumbents.

CTI reaffirms herein its support for AMR Rule repeal, and emphasizes that the rule’s application to a wholesaling model is particularly inapt.

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**COMMENTS IN RESPONSE TO PUBLIC NOTICE REQUEST FOR FURTHER
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Council Tree Investors, Inc. ("CTI")¹ hereby submits its comments in response to the Public Notice in the above-captioned proceeding, which seeks further comment regarding

¹ CTI is an investment company organized to identify and develop communications industry investment opportunities for the benefit of small businesses and new entrants, including those owned by members of minority groups and women. The company's eighteen-year record of advocating for and creating authentic diversity of ownership and competition in the broadcast and telecom industries is substantial. CTI and its principals have a robust history of advocacy, serving on FCC Advisory Committees, providing testimony before the FCC, and litigating in support of FCC positions. For example, Steve Hillard, CTI CEO, was appointed a member of the FCC's Advisory Committee on Diversity for Communications in a Digital Age by several FCC Chairmen. He served on the Advisory Committee for multiple years. Faced with the prospect of substantial damage to the DE program following FCC adoption of the 2006 DE Rules (defined *infra* note 6), the company reluctantly brought the legal challenge to those rules which overturned the two most harmful of them. *See Council Tree Commc'ns, Inc. v. FCC*, 619 F.3d 235, 259 (3d Cir. 2010), *cert. denied sub nom. Council Tree Investors, Inc. v. FCC*, 131 S. Ct. 1784 (2011) ("*Council Tree*"). The principals of CTI collectively own an indirect

spectrum auction bidding eligibility and activity particularly as it affects Designated Entities (“DEs”), in light of the record results of Auction 97.²

Data-Driven Burden of Proof

At the outset, CTI applauds the Commission’s establishment in the DE PN of the clear and critically important requirement that any changes in the DE Rules proposed in response to the DE PN must be supported by “*concrete data and analysis* to demonstrate whether and how such approaches will better meet *our statutory goals*” (the “Data-Driven Burden of Proof”).³ The Commission is correct to impose the Data-Driven Burden of Proof in this proceeding, and thereby demand detailed, data-based analysis from proponents of changes to the current DE Rules. Any such proposed change must not only identify any fact-based infirmities in the DE Rules, but it must include a fact-based solution that will demonstrably address any such problem without upsetting the delicate balance of factors under Section 309(j) of the Communications Act of 1934, as amended (the “Act”), 47 U.S.C. § 309(j).⁴

5.3 percent minority equity interest in Northstar Manager, LLC, which is part of an entity that participated in Auction 97.

² FCC Public Notice, *Request for Further Comment on Issues Related to Competitive Bidding Proceeding; Updating Part 1 Competitive Bidding Rules*, FCC 15-49, WT Docket Nos. 14-170 and 05-211, GN Docket No. 12-268, and RM-11395 (rel. Apr. 17, 2015) (“DE PN”).

³ See DE PN at 10, ¶ 19 (emphasis added). See also *id.* at 10, ¶ 21 (“We seek specific, data-driven comment regarding these alternative suggestions, including associated implementation issues”); and *infra* note 18.

⁴ See *infra* Section II. The DE PN’s imposition of the Data-Driven Burden of Proof is in keeping with the fundamental principle that an agency’s failure to anchor its public policy decisions in fact and data risks the adoption of rudderless rules. Courts require that “an agency examine the relevant data and articulate a satisfactory explanation for its action.” *FCC v. Fox Television Stations, Inc.*, 556 U.S. 502, 513 (2009) (quoting *Motor Vehicle Mfrs. Ass’n of the United States v. State Farm Mut. Auto. Ins. Co.*, 463 U.S. 29, 52 (1983)). There must be a “rational connection between the facts found and the choice made.” *State Farm*, 463 U.S. at 52 (quoting *Burlington Truck Lines, Inc. v. United States*, 371 U.S. 156, 168 (1962)). An agency cannot “offer[] an explanation for its decision that runs counter to the evidence before the

I. Introduction.

Between 1994 and 2006, the Commission's DE program ably served its statutory purposes (see Section II below). The Commission promoted robust competition by disseminating licenses widely and keeping license concentration at bay. In addition to a number of alliances involving DEs and companies that evolved into America's best known large wireless incumbents (*see* Exhibit 2 hereto), several sizable new wireless competitors ("New Entrant DEs") were born during this time period, including T-Mobile, Leap Wireless, and MetroPCS.

In 2006, just months prior to a major auction (66) of prime wireless spectrum, the FCC undertook a major revision of its DE program rules. In a rushed and politicized setting, the FCC issued a Further Notice of Proposed Rule Making with truncated comment (14 days after Federal Register publication) and reply comment (seven days thereafter) deadlines.⁵ The Report and Order ultimately adopted just prior to Auction 66 radically changed the DE program by means of draconian new rules, which were neither fact-based nor data-driven, and for which adequate notice had not been given. The Report and Order failed to explain how the new rules fixed any

agency." *Id.* at 43. Instead, an agency action must be "supported by 'substantial evidence on the record considered as a whole.'" *Id.* at 43-44 (quoting S. REP. NO. 1301, 89th Cong., 2d Sess., 8 (1966); H. R. REP. NO. 1776, 89th Cong., 2d Sess., 21 (1966)).

⁵ *Implementation of the Commercial Spectrum Enhancement Act and Modernization of the Commission's Competitive Bidding Rules and Procedures*, Further Notice of Proposed Rule Making, 21 FCC Rcd 1753 (2006) ("DE FNPRM"). The comment and reply comment deadlines in the current DE PN proceeding are similarly short (21 days after publication in the Federal Register for comments, and seven additional days for reply comments). DE PN at 1. DEs in particular are disadvantaged by this very brief DE PN reply period, given the expected volume of comments and the scope and importance of the issues. CTI acknowledges that the Wireless Telecommunications Bureau extended the initial comment period for the 2014 Part 1 NPRM several times specifically to receive comments on the outcome of Auction 97. *See, e.g., Updating Part 1 Competitive Bidding Rules*, Order, 30 FCC Rcd (2015). The Auction closed on January 29, 2015 and the initial comments were due February 20, 2015 and reply comments only two weeks later, March 6, 2015. *Updating Part 1 Competitive Bidding Rules*, Order, 30 FCC Rcd 790 (2015).

purported problems with the DE program.⁶ With the 2006 DE Rules in place, major spectrum Auctions 66 (2006) and 73 (2008) witnessed historically low levels of DE participation and parallel domination by the large incumbents.⁷

Against this background, a sense of déjà vu attends issuance of the DE PN, particularly given recent criticisms of DE participation in Auction 97's sale of AWS-3 frequencies. That is, the above synopsis of events leading up to and the adoption of the onerous and competition-killing 2006 DE Rules parallels in certain respects a scenario which holds the potential to play out today. History, however, must not repeat itself. The hard lessons learned from the application of the 2006 Rules to Auctions 66 and 73, conducted with two of the most draconian 2006 DE Rules in place, particularly when viewed through the prism of the much more successful Auction 97, must be applied going forward.

⁶ For a summary of DE Rules adopted in 2006 (the "2006 DE Rules"), see the March 6, 2015 Reply Comments of CTI in this proceeding ("CTI Reply Comments," copy attached hereto as Exhibit 1) at 2-3. In the instant comments, CTI will employ certain shorthand terms fully defined in the CTI Reply Comments.

⁷ DEs, for example, won only 4 percent of the total value of the licenses sold in Auction 66 and even less, just 2.6 percent of that value, in Auction 73. *See Council Tree*, 619 F.3d at 248. This anemic DE participation in these auctions led to dramatically lower revenue generation than witnessed in recently concluded Auction 97, a compelling illustration of the basic principle that more bidders equal more revenue. *See* Exhibit 4 hereto and the discussion *infra* at Section IV.

The 2006 DE Rules suffered from numerous infirmities.⁸ As a consequence, the Ten Year Hold Rule and the 50 Percent Rule were vacated by the United States Court of Appeals for the Third Circuit in 2010.⁹

The DE PN is in many ways broader in scope than the Commission’s October 2014 Notice of Proposed Rule Making in this proceeding.¹⁰ The 2014 Part 1 NPRM posed questions relating to the repeal of the Attributable Material Relationship Rule (“AMR Rule”) and the interpretation of the FCC’s facilities-based “service to the public” rationale, among others. The DE PN, on the other hand, sets forth for additional comment a host of proposals (no less than thirty) drawn more or less verbatim from comments submitted in response to the 2014 Part 1 NPRM. These proposals hold the potential to again decimate the DE program and New Entrant DE participation in spectrum auctions.¹¹ In essence, the DE PN puts the FCC back on the

⁸ See, e.g., CTI Reply Comments at 2-3. The last-minute timing of those rules’ adoption also destabilized DEs and injected uncertainty in the capital markets. S. Jenell Trigg, Esq. and Jeneba Ghatt, Esq., *Digital Deja Vu: A Road Map for Promoting Minority Ownership in the Wireless Industry*, MMTC White Paper (Feb. 2014) at 14 (“MMTC White Paper”); see also Comments of the DE Opportunity Coalition (“DOC”), WT Docket No. 14-170 et al. (Feb. 20, 2015), at 27-31 (citing to comments on negative economic impact of 10-Year Hold Rule from DEs and DE investors, and individual DE case studies). DEs in general had insufficient time to modify business plans and/or find new financing – all in potential violation of Section 309(j)(3)(E). 47 U.S.C. § 309(j)(3)(E).

⁹ See generally *Council Tree*. The 2006 DE Rules severely hampered, if not negated, the ability of many rural telephone companies, small businesses and New Entrant DEs alike to participate successfully in Auctions 66 and 73. See MMTC White Paper at 14-17; see also DOC Comments at 7-8.

¹⁰ See generally *Updating Part 1 Competitive Bidding*, Notice of Proposed Rule Making, 29 FCC Rcd 12426 (2014) (“2014 Part 1 NPRM”).

¹¹ See *infra* Section V. The DE PN, however, makes clear that these proposals must satisfy the Data-Driven Burden of Proof.

precipice of a potentially devastating overhaul of the entire DE program within months of a major auction, in this case the Broadcast Incentive Auction (“BIA”).¹² Déjà vu, indeed.

II. Balancing the Statutory Mandates Under Section 309(j).

From the time Congress first granted the FCC spectrum auction authority, the agency has acknowledged that it must address each of the various statutory mandates under Section 309(j) of the Act in order to foster development of a successful DE program, and to conduct fair and competitive auctions.¹³

In particular, Section 309(j)(3)(B) directs the Commission to:

promot[e] economic opportunity *and competition* and ensur[e] that new and innovative technologies are readily accessible to the American people by *avoiding excessive concentration* of licenses and by *disseminating licenses among a wide variety of applicants, including* small businesses, rural telephone companies, and businesses owned by members of minority groups and women.¹⁴

¹² The ill-advised changes to DE rules immediately prior to Auction 66 effectively decimated the DE program until *Council Tree*. Some of the unfounded changes proposed in comments to the 2014 Part 1 NPRM hold an equal potential for precluding New Entrant DE participation in the BIA and thereby undercutting the BIA’s viability, drastically reducing competition and probable auction proceeds.

¹³ See *Implementation of Section 309(j) of the Communications Act - Competitive Bidding*, Notice of Proposed Rule Making, 8 FCC Rcd 7635, 7648, ¶ 81 (1993) (“First NPRM”); see also *Implementation of Section 309(j) of the Communications Act - Competitive Bidding*, Second Report and Order, 9 FCC Rcd 2348, 2349, ¶ 3 (1994) (“Competitive Bidding Second Report and Order”) (“Our purpose in this Second Report and Order is to promulgate competitive bidding rules that, in conjunction with our spectrum allocation rules, promote the public policy objectives set forth by Congress. We believe these objectives are embodied in two broad, basic Commission policy goals: promoting economic growth and enhancing access to telecommunications service offerings for consumers, producers, and new entrants. Structuring our rules to promote opportunity and competition should result in the rapid implementation of new and innovative services and encourage efficient spectrum use, thus fostering economic growth.”).

¹⁴ 47 U.S.C. § 309(j)(3)(B) (emphasis added).

Additionally, Section 309(j)(4) directs the Commission to prescribe regulations pursuant to Section 309(j)(3). The Commission shall:

consistent with the public interest, convenience, and necessity, the purposes of this chapter, and the characteristics of the proposed service, prescribe area designations and bandwidth assignments that *promote* (i) an *equitable distribution of licenses and services among geographic areas*, (ii) economic opportunity for a wide variety of applicants, including small businesses, rural telephone companies, and businesses owned by members of minority groups and women¹⁵

CTI notes for the record that certain language employed in these sections amplifies their focus on the avoidance of excessive license concentration and a wide dissemination of licenses. First, Section 309(j)(3)(B)’s inclusion of the term “*and competition*” was deliberate, and was added to the statute with bi-partisan support.¹⁶ These words were meant to emphasize a fundamental DE program purpose: to bring competition to an industry that was already starting to become concentrated in 1993 across regions. Given large incumbent consolidation in the largest markets, the only way, as a matter of fact, for the DE program to accomplish that goal, of course, was to allow DEs to compete in those markets at high dollar levels. Second, the use of the word “*including*” in that same section must be read to mean that the list of entities which follows (“small businesses, rural telephone companies, and businesses owned by members of minority groups and women”) is *not* exclusive, leaving the door very much open to the FCC

¹⁵ 47 U.S.C. § 309(j)(4)(C)(i) and (ii) (emphasis added).

¹⁶ See Statement of then-Representative J. Dennis Hastert (R-14th IL) (Aug. 5, 1993), 139 Cong. Rec. 19300, 19365 (1993) (“We need to make sure that all qualified bidders will have the opportunity to participate in this new process. That is why I was pleased that Chairmen Dingell and Markey worked with me to add the words ‘and competition’ to section 309(j)(3)(B) of title VI. This language will ensure that the FCC promotes competition during this new procedure thereby giving all potential bidders the opportunity to procure spectrum at auctions.”). Representative Hastert later became the longest-serving Republican Speaker of the House in history. See J. Dennis Hastert – Biography, Dickstein Shapiro LLP, <http://www.dicksteinshapiro.com/people/speaker-j-dennis-hastert> (last visited May 12, 2015).

bringing competition to large incumbents at high dollar levels by incentivizing auction participation by small businesses, properly structured under the Commission’s Rules, and well-capitalized with large investors in place.¹⁷ Third, Section 309(j)(4)’s use of the term “*equitable distribution of licenses and services among geographic areas*” makes clear that an important purpose of the DE program is to facilitate wireless industry competition in all markets: large, medium, and small. Such broad competition requires, as to the large incumbents, a DE program that allows for the deployment of large dollar amounts to permit DEs to secure footholds in major markets to establish regional and even national operations. All of this statutory language strongly supports the proposition that, from the outset, Section 309(j) directed the FCC to design a DE program that would foster competition with large incumbents.

For commenters to satisfy the DE PN’s quite properly established Data-Driven Burden of Proof,¹⁸ they must show how any proposed change allows the Commission to balance *all* of the statutory mandates under Section 309(j), including mandates to promote competition, avoid an excessive concentration of licenses, disseminate licenses to a wide variety of applicants, and

¹⁷ See, e.g., *Federal Land Bank v. Bismarck Lumber Co.*, 314 U.S. 95, 100 (1941) (“the term ‘including’ is not one of all-embracing definition, but connotes simply an illustrative application of the general principle”) (citations omitted). In *Cincinnati Bell Tel. Co. v. FCC*, 69 F.3d 752, 762 (6th Cir. 1995), the Sixth Circuit determined that, with respect to Section 309(j)(3)(B), “the phrase ‘including small businesses, rural telephone companies, and businesses owned by members of minority groups and women,’ was not meant by Congress as an exhaustive list of the permissible groups for which the FCC might adopt certain rules to enhance their participation in the bidding process. Rather, the list is merely illustrative”

¹⁸ For example, in seeking comments on the specific suggestions raised in the record, the DE PN asks “interested parties to provide *specific details* on how any proposed rule amendment would further the Commission’s policy objectives of providing small business opportunities and presenting unjust enrichment of ineligible entities.” DE PN at 5, ¶ 10 (emphasis added).

equitably distribute licenses and services among geographic areas, notably large markets.¹⁹ As the DE PN's Data-Driven Burden of Proof recognizes, such a rational connection is necessary to ensure that any new or amended rules neither favor incumbency over new entrant participation, nor restrict new entrant small businesses from competing on a regional or national scale.²⁰

A. The Principles of Competition and Diversity That Undergird the FCC's Auction Authority Have Received Bi-Partisan Support for Decades.

The important principles of diversity and competition are foundational to the FCC's authority to conduct competitive bidding, and have received bi-partisan support in Congress from the time the legislation which ultimately led to Section 309(j) was introduced in 1993. That is, S. 335, the Emerging Telecommunications Technologies Act of 1993, was a predecessor bill to that part of the Omnibus Budget Reconciliation Act of 1993 ("OBRA"), which granted competitive bidding authority to the FCC. S. 335 received bi-partisan support, including sponsors on both sides of the aisle who raised concerns about the ability of small businesses and

¹⁹ See *Ex Parte* Letter from Stephen Hillard, Council Tree Investors, Inc., to FCC Chairman Tom Wheeler, WT Docket No. 14-170 et al. (Mar. 23, 2015), at 2 ("To ensure that these statutory directives are properly considered and balanced in any revision of auction rules, we urge the Commission to seek broad comment concerning *all* of the impacts which any auction rule changes, in particular any revisions to 'Designated Entity' (DE) rules, would have upon the key goals of 'avoiding excessive concentration' and 'ensuring wide dissemination' of licenses in the U.S. wireless market.") (emphasis in original).

²⁰ Under the plain language of Section 309(j), DEs' acquisition of only a basket of small market licenses would not constitute "wide" dissemination of licenses. Furthermore, the history of Auction 66, 73, and 97 provides every indication that preservation of a viable DE program, allowing DEs to continue to compete in the large markets, will pay dividends in the form of expanded BIA revenue.

minority-owned businesses to compete at auction.²¹ In a similar way, the Commission's auction authority to conduct the upcoming BIA was predicated on that auction's ability to promote competition and to avoid an excessive concentration of licenses. "[T]he [Public Safety and Spectrum Act] preserves the FCC's ability to use auction rules to promote competition in the wireless industry while ensuring that no single carrier is unfairly excluded from the auction process. As the steward of the public's airwaves, the FCC must have the authority to write *auction rules that aim to avoid the concentration of spectrum in the hands of just a small group of companies.*"²² Any changes, therefore, to the DE program that restrict the eligibility of New Entrant DEs in favor of incumbents – large or small – or that hamper the ability of New Entrant DEs to raise equity or debt financing on a scale necessary to acquire spectrum in the largest markets are contrary to congressional intent.

The Commission followed Congress' lead early on by implementing its competitive bidding authority in bi-partisan fashion, manifested in unanimous votes in favor of various

²¹ See, e.g., S. 335, *the Emerging Telecommunications Technologies Act of 1993*, Hearing Before the S. Subcomm. on Commc'ns of the Comm. on Commerce, Sci., and Transp., 103rd Cong. 20 (1993) ("S. 335 Hearing") (Statement of Senator Conrad Burns (R-MT)) ("[H]ow do we protect those people who I think should have a shot at some of this spectrum, either from a minority standpoint or by a small business or a small entrepreneur just starting out, and you are not competing against the deep pockets?"); see also *id.* at 20 (Statement of Senator John McCain (R-AZ)) ("How do you envision that we could protect the ability of minorities, less wealthy individuals, companies, or corporations, or others to obtain someplace in the spectrum under this legislation"). Senator Daniel K. Inouye, Chairman of the Subcommittee on Communications, also expressed concern about the Commission's ability to "carefully tailor the specs or regulations to cope with some of the problems such as small business or profitmaking and such. Is the FCC fully authorized to carefully tailor this process and is the FCC prepared to do so?" *Id.* at 13-14 (Statement of Senator Daniel K. Inouye (D-HI)).

²² *Keeping the New Broadband Spectrum Law on Track: Hearing Before the H. Subcomm. on Commc'ns and Tech. of the H. Comm. on Energy and Commerce*, 112th Cong. 2 (2012) (opening statement of Rep. Henry A. Waxman, Ranking Member, H. Comm. on Energy and Commerce) (emphasis added).

NPRMs and Report and Orders, including the Report and Order that first made it possible for DEs to partner with large investors as a primary source of capital and support.

B. The “Small Business” Classification Must Be Put Into Perspective and Context.

The term “small business” has been bandied about by the critics of the DE program in an effort to tarnish the success of DEs that have properly allied with large investors.²³ Analysis of

²³ DEs’ unprecedented success in Auction 97 was due to longstanding Commission policies and rules that allow and encourage DEs to enter into strategic alliances with larger investors, an approach that was initially based on the need to offset continuing access to capital obstacles faced by minority- and women-owned telecommunications businesses of all sizes. *Implementation of Section 309(j) of the Communications Act - Competitive Bidding*, Fifth Report and Order, 9 FCC Rcd 5532, 5601, ¶ 260 (1994) (“Competitive Bidding Fifth Report and Order”); *see also* First NPRM at 7648, ¶ 80 (citing to the FCC Small Business Advisory Committee (“SBAC”) Report’s findings of special barriers to telecommunications ownership encountered by woman and members of minority groups).

The Commission recognized that:

Congress clearly intended that businesses owned by minorities and women must be given the opportunity to participate in the provision of spectrum-based services independent of their status as small businesses. The plain language of Section 309(j)(4)(D) states that the Commission “shall . . . ensure” the opportunity for participation by “small businesses . . . and businesses owned by members of minority groups and women. . . .” (emphasis added). If Congress had intended to limit the directive of Section 309(j)(4)(D) only to small businesses, there would have been no need to mention separately minorities and women.

Implementation of Section 309(j) of the Communications Act - Competitive Bidding, Third Report and Order, 9 FCC Rcd 2941, 2974, ¶ 78 (1994) (“Competitive Bidding Third Report and Order”). “Moreover, Section 309(j)(4)(D) was added at Conference, and the Conference Report does not offer any suggestion that, to come within the section’s purview, businesses owned by minorities or women must be small businesses.” *Id.* Today, this policy and the rules that promote strategic alliances with larger companies apply to all small businesses, including rural telephone company DEs.

Some commenters have incorrectly asserted that Auction 97 contained “reserve set asides” for small businesses and minority-owned businesses and the overall DE program is a set-aside program. *See, e.g.*, Letter from Larry Cohen, President, Communications Workers of America and Hilary O. Shelton, Director, NAACP Washington Bureau and Senior Vice President for Advocacy and Policy, to FCC Chairman Tom Wheeler, WT Docket No. 14-170 et al. (Mar. 12, 2015). These commenters are ill-informed. The FCC has not conducted a DE-only auction since

data from prior auctions belies this claim. Exhibit 3 hereto cites five past occasions where the Commission approved applications by which individual DEs each won more than \$1 billion in licenses. Many more approved DE applications involved hundreds of millions of dollars. *See* Exhibit 3 hereto. This claim also conveniently ignores the rationale and history of the small business classification as well as the reality of the capital-intensive nature of today's wireless industry. CMRS (commercial mobile radio services) has never been accommodating to typical small businesses or "Mom & Pop" shops. Congress, the Commission and the industry have long recognized that, as a general proposition, the wireless industry is highly capital intensive, requiring purposeful government incentives to foster both competition and diversity.²⁴ The

PCS F Block, Auction 11 in 1997. *See FCC Report to Congress on Spectrum Auctions, WT Docket No. 97-150*, FCC Wireless Telecommunications Bureau, 13 FCC Rcd 9601, 9612 (1997) ("FCC Congressional Auction Report"); *see also Service Rules for Advanced Wireless Services in the 1.7 GHz and 2.1 GHz Bands*, Report and Order, 18 FCC Rcd 25162, 25189-90, ¶ 68 (2003) (resolving not to set aside any advanced wireless services licenses for bidding only by designated entities). The set-aside of spectrum blocks for DEs-only was one of several incentives historically used by the FCC to promote diverse DE participation. *See* DOC Comments at 29 n.86. Today, bidding credits are the only remaining incentive available to DEs. Significantly, there are no current special incentives or programs specifically tailored for minority- or women-owned businesses. The FCC commenced implementation of the DE program on a race-neutral *and* gender-neutral basis in 1995 after the Supreme Court's decision in *Adarand Constructors Inc. v. Peña*, 515 U.S. 200 (1995). *See generally Omnipoint Corp. v. FCC*, 78 F.3d 620 (D.C. Cir. 1996); *see also* FCC Congressional Auction Report at 9646; and MMTC White Paper at 18-19.

²⁴ *See, e.g.,* Competitive Bidding Fifth Report and Order, 9 FCC Rcd at 5572, ¶ 95 ("In particular, we have concluded that steps such as adoption of bidding credits, tax certificates, alternate payment plans, and relaxed attribution rules, must be taken to encourage investment in minority and women-owned businesses. These special provisions are tailored to address the major problem facing minorities and women desiring to offer PCS – lack of access to capital. Moreover, because broadband PCS licenses in many cases are expected to be auctioned for large sums of money in the competitive bidding process, and because build-out costs are likely to be high, it is necessary to do more to ensure that designated entities have the opportunity to participate in broadband PCS than is necessary in other, less costly spectrum-based services."); *see also* H.R. REP. NO. 103-111, at 255 (1993) ("[T]he Commission should adopt regulations pursuant to this section to ensure that business owned by members of minority groups and women *are not in any way* excluded from the competitive bidding process.") (emphasis added).

Commission's current revenue-based definition of small businesses, coupled with its well-established concepts of attribution and control, reflect this fact, and allow for DE's of all types – including new entrants, backed by a wide variety of investors, to qualify at auction.²⁵

There has in fact always been an intention that DEs be incentivized and encouraged to compete at all levels at auction – including for national and regional licenses – consistent with congressional mandates to avoid an excessive concentration of licenses, to disseminate licenses amongst a wide variety of applicants, *and* to distribute licenses in an equitable manner among geographic areas.²⁶ A new entrant must be able to raise sufficient capital to compete in any geographic area against both large and small incumbents,²⁷ who have existing infrastructure and

²⁵ See *Amendment of Part 1 of the Commission's Rules – Competitive Bidding Procedures*, Third Report and Order and Second Further Notice of Proposed Rule Making, 13 FCC Rcd 374, 386, ¶ 14 (1997) (“Part 1 Third Report and Order”) (“We adopt the rules in this *Third Report and Order* in order to facilitate broad-based participation in auctions. We believe that standardizing the rules regarding definitions of eligible entities, unjust enrichment and bidding credits will assist small, minority and women-owned businesses because of the rules’ predictability will facilitate the business planning and capital fundraising process.”).

²⁶ See, e.g., *Competitive Bidding Third Report and Order*, 9 FCC Rcd 2941 at 2968, ¶ 66; *id.* at 3011-12 (Concurring Statement of Commissioner Andrew Barrett) (“I believe these features would enhance the probability of DE participation in nationwide and regional licenses, in particular, and facilitate more flexible support for DE aggregation of BTAs. Without some blocks specifically set-aside for DE bidding only in each market, I remain concerned that our sincere efforts in this Order could still limit the ability to participate in major license markets – particularly nationwide or regional licenses. Thus, I would have sought additional flexibility with bidding credits and potential consortia arrangement for DEs to enhance their ability to participate in major market license operations. It is my hope that we will retain the flexibility to adjust these rules prior to conducting the narrowband PCS auctions, if it proves useful to our goal of facilitating real, substantive opportunities for DE participation in the bidding process and eventual operation of PCS licenses.”).

²⁷ Congress fully envisioned that the DE program would bring competition to rural America. Even members of the Senate Commerce Committee in 1993 who were very strong supporters of rural telephone companies emphasized that they wanted competition in rural areas. See *supra* note 21, S. 335 Hearing at 49 (Statement of Senator Stevens (D-AK)) (“We would like to have competition in rural America.”); see also *id.* at 50 (Statement of Senator Burns (R-MT)) (“Well, I feel that as my friend does from Alaska and the chairman of this committee, that those of us who do have rural areas that we think we need some special provisions there to keep the

an existing subscriber base and therefore, would “have lower costs of construction and operation through equipment volume discounts, existing billing, accounting, order entry and processing, and customer service systems.”²⁸

Congress (and the FCC) fully anticipated that experienced and enterprising entrepreneurs would create wholly new start-ups in order to compete against incumbents at auction.²⁹ America

megapolises off it, as Senator Stevens would say, but also have some competition in that market in rural areas because of the unique situation that it is in.”).

²⁸ Competitive Bidding Fifth Report and Order, 9 FCC Rcd at 5584, ¶ 119 (commenting on the differences in valuing a license between a small or minority-owned business and a large local exchange carrier). “NTIA agrees that capital formation is a major barrier to full participation by small and minority owned firms, asserting that capital-constrained firms are likely to assign lower values to . . . licenses than other bidders and therefore are less likely to obtain licenses in an open bidding market.” *Id.* at 5584, ¶ 120.

²⁹ *See, e.g.*, S. 335 Hearing at 6 (Letter from Ronald H. Brown, Secretary of the U.S. Dept. of Commerce to The Honorable Daniel K. Inouye) (“*Protecting the legitimate needs of entrepreneurs, new entrants, and nonprofit and other groups whose continued access to spectrum is in the public interest.* A competitive bidding system can be designed to provide entrepreneurs and new entrants to spectrum-based industries with direct access to spectrum licenses, rather than indirect access through secondary markets.”); *see also* Competitive Bidding Second Report and Order, 9 FCC Rcd at 2389, ¶ 230 (“Moreover, this program will lead to the development and rapid deployment of new service by entrepreneurs who have traditionally lacked access to the telecommunications marketplace.”). Congress’ concern about promoting opportunities for minority and women-owned business was based on ample evidence that such entities were grossly underrepresented in the telecommunications sector. *See Section 257 Proceeding to Identify and Eliminate Market Entry Barriers for Small Business*, Report, 12 FCC Rcd 16802, 16930, ¶ 221 (1997) (“FCC Section 257 Order”) (“There is a long history of recognition by this agency, as well as by courts, Congress, and the public, that minorities and women have experienced serious obstacles in attempting to participate in the telecommunications industry and their greater participation would enhance the public interest.”) (footnote omitted). In fact, the Commission recognized that in 1982 Congress observed that “the effects of past inequities stemming from racial and ethnic discrimination have resulted in a severe underrepresentation of minorities in the media of mass communications.” *Id.* (footnote omitted). Congress later authorized the Commission to provide minority preferences in awarding spectrum licenses by lottery. *Id.* Given the paucity of existing telecommunications businesses owned by minorities and women, it stands to reason that such entities would need to create brand new businesses to compete at auction. In designing the DE eligibility rules, a major concern regarding New Entrant DEs was that a large incumbent could spin off an affiliated company or division in order to qualify as a DE and receive a government incentive, not that

has been built on the “backs” of start-ups, which by their nature lack revenue and must find financial support to acquire the necessary resources for their new businesses, including licenses. New Entrant DEs are no different than entrepreneurs in other industries. They must rely on investment capital until they can generate revenue and, eventually, profit. For this reason, the Commission took special care to address the needs of minority- and women-owned business, which have long faced substantial obstacles in accessing capital.³⁰ Yet today, the number of minority and women-owned telecommunications businesses is even lower than at the passage of the OBRA in 1993.³¹ This is due to a variety of factors, including certain rules, policies and decisions that inadvertently affected DEs and allowed larger incumbent providers to further expand their footprints (e.g., the approval of mega mergers) and the misadventure of the 2006 DE Rules.³² And while the Commission modified its rules in 1995 to eliminate the race-based

start-up companies would qualify as DEs. *See* Competitive Bidding Second Report and Order, 9 FCC Rcd at 2395, ¶ 270.

³⁰ *See* Competitive Bidding Fifth Report and Order, 9 FCC Rcd at 5590, ¶ 132; *see also* FCC Section 257 Order, 12 FCC Rcd at 16930, ¶ 221.

³¹ *See* FCC Advisory Committee on Diversity for Communications in a Digital Age Telecom and Broadband Issues Subcommittee, *Proposal to Restore the FCC’s Designated Entity (“DE”) Program* (Sept. 14, 2009) at 4, *available at* <http://transition.fcc.gov/DiversityFAC/092209/broadband-sub-proposal-de.pdf> (“Eliminating DE Competition Only Worsened the Near Total Absence of Minority Ownership”); *see also* MMTC White Paper at 18 (citing to then-FCC Commissioner Adelstein’s remarks on the poor performance of Auction 73 for minority- and women-owned businesses, less than 1 percent and 0 percent, respectively). The Commission has little, if any, statistics on the current number of minority- and women-owned telecommunications companies nor does it have an accurate tally of how many minority-owned and women-owned businesses participated successfully in FCC auctions overall. This is why the Commission sought public comment on the state of diversity in the wireless industry in 2013 FCC Public Notice, *Wireless Telecommunications Bureau Seeks Further Comment on the State of Mobile Wireless Competition and the Role of Minority and Women-Owned Business Enterprises*, 28 FCC Rcd 9125 (2013). *See* CTI’s Comments in that proceeding, filed July 25, 2013.

³² *See* MMTC White Paper at 6-15. The elimination of the spectrum cap by the FCC effective January 1, 2003 also impacted DEs. *See* 2000 Biennial Regulatory Review Spectrum

and gender-based classifications of DEs and instead adopt the race-neutral small business classification, that did not change the FCC's obligation to take unique access to capital obstacles into account, and to continue to work to find ways to bolster the DE program's access to capital for each different type of DE.³³ The FCC remains obligated by the statute to promote participation by all enumerated classifications of DEs, even as it implements such requirements on a race-neutral and gender-neutral basis.³⁴

i. The FCC's Definition of Small Business Includes New Entrants and Incumbents.

The current small business definitions in Part 1 of the Commission's rules are based on an entity's average annual gross revenues over the preceding three calendar years and there are three tiers of small business definitions with corresponding scaled bidding credit percentages.³⁵ The cognizable annual gross revenues of qualified DEs may not exceed the following:

Aggregation Limits for Commercial Mobile Radio Services, Report and Order, 16 FCC Rcd 22668, 22669, ¶ 1 (2001). Without restrictions on how much spectrum any one entity could hold, incumbent providers were able to increase in size and expand their spectrum footprints, to the detriment of New Entrants DEs.

³³ The Commission also recognized early on that "different approaches may be appropriate to address the specific concerns applicable to each enumerated entity." First NPRM, 8 FCC Rcd at 7646, ¶ 75; *see also* DOC Comments at 22 ("It is abundantly clear that the various categories of DEs (small businesses rural telephone companies, minority-owned businesses, and women-owned businesses), as well as the individual businesses that fall within each category, do not automatically have the same business needs.").

³⁴ *See* FCC Congressional Auction Report at 28 ("In the wake of these [Supreme Court] decisions, the Commission has been examining market entry barriers facing small businesses in the communications industry and unique barriers faced by minority- and women-owned businesses. *This ongoing analysis will help the FCC to develop rules and practices to meet Congress' intent of widespread dissemination of licenses.*") (emphasis added).

³⁵ *See* 47 C.F.R. § 1.2110(f).

\$40 Million; \$15 million; and \$3 million.³⁶ The Commission determines which tier to use on a service-by-service basis based on the characteristics of the specific wireless service or spectrum to be auctioned.³⁷ These definitions were the subject of much debate and deliberation over a period of years. In 1993, the wireless industry was considered to be a capital-intensive, rather than labor-intensive industry.³⁸ Industry commenters and the SBA's Office of Advocacy argued that early proposed definitions of small business based on the SBA's Certified Development Company program's definition of a net worth not in excess of \$6 million and \$2 million in net revenue, were "too restrictive and will exclude businesses of sufficient size to survive, much less succeed, in the competitive wireless communications marketplace."³⁹ The Commission ultimately recognized that even entry into narrowband PCS would be capital intensive, and therefore rejected the SBA's size standard and adopted the \$40 million revenue standard to be consistent with the size standard already established for broadband PCS.⁴⁰ This Commission

³⁶ *See id.* Significantly, these definitions have been approved by the U.S. Small Business Administration ("SBA"), pursuant to the Small Business Act, 15 U.S.C. § 632(a)(2). *See, e.g.,* Letter from Philip Lader, Administrator, U.S. Small Business Administration, to William E. Kennard, Esq. General Counsel, FCC (Apr. 20, 1995) (approving the FCC's new size standard for narrowband PCS Auction). The Commission is required to secure approval of the SBA Administrator for any small business definition used by the Commission that differs from the SBA's standard definitions. *Id.* The FCC must also put any proposed definition out for public notice and comment. *Id.*

³⁷ 2014 Part 1 NPRM, 29 FCC Rcd at 12445, ¶ 52.

³⁸ *See* Competitive Bidding Second Report and Order, 9 FCC Rcd at 2395, ¶ 268 n.207. Given intervening advancements in technology, this is even more true today.

³⁹ *Id.* at 2395, ¶ 268.

⁴⁰ *Implementation of Section 309(j) of the Communications Act – Competitive Bidding Narrowband PCS*, Third Memorandum Opinion and Order and Further Notice of Proposed Rule Making, 10 FCC Rcd 175, 195-96, ¶¶ 44, 46 (1994) ("Narrowband PCS Third MO&O"). The SBAC Report also questioned whether the \$6 million net worth/\$2 Million net revenue test "is too low for telecommunications industries, such as PCS, that may be capital intensive." First NPRM, 8 FCC Rcd at 7647, ¶ 77 n.51. The smaller revenue tiers of \$3 Million and \$15 Million

decision found substantial support in the record, as it would allow participation of firms of sufficient size to survive in a competitive wireless market.⁴¹ The Commission (as well as the SBA Administrator and SBA's Office of Advocacy) also summarily rejected an alternative SBA size standard specifically for the wireless industry of a maximum of 1,500 employees,⁴² because such a standard would permit large companies themselves to become DEs, defeating the purpose of the program.⁴³ Today, a telecommunications company that has between 500 and 1,500 employees is likely to be well capitalized.⁴⁴

ii. Proposals to Change the Definition of Small Business Based on SBA Definitions Are Unreasonable and Inappropriate.

AT&T proposes a change in the definition of small business based on the SBA's size standard for "All Other Telecommunications," which is \$32.5 million annual gross revenues, and also proposes to cap the amount of bids placed by a qualifying DE at that same dollar level.⁴⁵

were initially established for specific services that were not as capital intensive as PCS and then codified as universal standards under Part 1 regulations. *See* Competitive Bidding Third Report and Order, 13 FCC Rcd at 387, ¶ 16 n.38.

⁴¹ Narrowband PCS Third MO&O, 10 FCC Rcd at 195-96, ¶ 45.

⁴² Then the Standard Industrial Classification (SIC) Code, Radiotelephone Communications, 4812. Now SBA size standards are classified as the North American Industry Classification System ("NAICS").

⁴³ Competitive Bidding Second Report and Order, 9 FCC Rcd at 2396, ¶ 273; *see also* Comments of the Chief Counsel for Advocacy of the United States Small Business Administration on the Further Notice of Proposed Rule Making, PP Docket No. 93-144 et al. (Jan. 5, 1995) at 17 n.27 ("The Office of Advocacy, the SBA, and the FCC all concur that this is an inappropriate definition for the purpose of implementing OBRA's auction requirements.").

⁴⁴ *See infra* pages 19-20 and note 51.

⁴⁵ Comments of AT&T, WT Docket No. 14-170 et al. (Feb. 20, 2015), at 17 and n.34 (citing to 13 C.F.R. § 121.201). "All Other Telecommunications" is identified by NAICS Code 517919. "This U.S. industry comprises establishments primarily engaged in providing specialized telecommunications services, such as satellite tracking, communications telemetry, and radar station operation. This industry also includes establishments primarily engaged in providing

First, this is a backdoor proposal to revisit well-established FCC definitions of small business under Part 1 that are based on gross annual revenues and the capital intensive nature of the wireless industry. Second, AT&T cites the wrong SBA size standard and its proposal is otherwise unreasonable and inappropriate based on the history of the DE program and marketplace realities.⁴⁶

Any proposal to modify the definition of small business to lower the annual revenue thresholds is effectively an attempt to stifle new entrant competition on the basis of old and previously rejected arguments. SBA rules provide that an applicant for the SBA's assistance will qualify as a small business if it meets the size standard of the industry in which it is primarily engaged.⁴⁷ But SBA size standards relevant to entities that participate in FCC auctions of wireless spectrum are based not on annual revenues, but on employee levels – namely, entities with 1,500 or fewer employees under the NAICS subsector 51720, Wireless Telecommunications Carriers (except Satellite).⁴⁸ The SBA does not use \$32.5 Million in

satellite terminal stations and associated facilities connected with one or more terrestrial systems and capable of transmitting telecommunications to, and receiving telecommunications from, satellite systems. Establishments providing Internet services or voice over Internet protocol (VoIP) services via client-supplied telecommunications connections are also included in this industry. **Illustrative Examples:** Dial-up Internet service providers; VoIP service providers, using client-supplied telecommunications connections; Internet service providers using client-supplied telecommunications connections (e.g., dial-up ISPs); Satellite tracking stations.” <http://www.naics.com/naics-code-description/?code=517919>.

⁴⁶ See Reply Comments of The Auction Reform Coalition (“TARC”), WT Docket No. 14-170 et al. (Mar. 6, 2015), at 6-7.

⁴⁷ See 13 C.F.R. § 121.101(a).

⁴⁸ 13 C.F.R. § 121.201 (NAICS Code 517210 in the Telecommunications Subsector, 517). “This industry comprises establishments engaged in operating and maintaining switching and transmission facilities to provide communications via the airwaves. Establishments in this industry have spectrum licenses and provide services using that spectrum, such as cellular phone services, paging services, wireless Internet access, and wireless video services. **Illustrative Examples:** Cellular telephone services; Wireless Internet service providers, except satellite;

revenue size standard as AT&T proposes for relevant wireless services. Furthermore, AT&T's proposed revenue standard is both lower than the highest tier of the FCC's current Part 1 size standards, and does not reflect the cost of inflation nor a vastly consolidated wireless industry since the highest tier was first adopted. Any cap on bidding credits based on annual revenues is too restrictive and places arbitrary limits on how much a DE can win at auction.

Competitive Carriers Association ("CCA") proposes that as an alternative the Commission use the SBA's 1,500 employee size standard to define small business in the auction context.⁴⁹ They argue that the firms that would qualify under this definition generated approximately \$10 billion in receipts out of \$170 billion for the entire industry in 2007.⁵⁰ However, this comparison of the aggregate revenue generated by a subset of qualifying firms with that of the entire industry of which the subset is a part is a red herring. A firm within the subset could easily generate large annual gross revenues, making a small business designation inappropriate. Indeed, using the same Census Bureau data cited to by CCA, firms under NAICS Sector 517210 that have a maximum of 1,500 employees would, based on an average revenue per employee metric, generate about \$623 million gross annual revenues per year.⁵¹ These

Paging services, except satellite; Wireless telephone communications carriers, except satellite." <http://www.naics.com/naics-code-description/?code=517210>.

⁴⁹ CCA Comments, WT Docket No. 14-170 et al. (Feb. 20, 2015), at 7-8.

⁵⁰ *Id.* n.20.

⁵¹ Table No. EC0751SSSZ5 reports that firms in NAICS Sector 517210 with 500-999 employees generated \$2,717,552 in total revenue. Those firms had 6,545 full time employees; therefore, the average annual revenue per employee is \$415,210. The Table does not provide information for firms with maximum 1,500 employees; however, the multiple of \$415, 210 per employee by 1,500 employees equals \$623 million in annual gross revenue. Using a lower number of employees generates a similar result of a relatively large capitalized firm (500 employees x \$415,210 per employee = \$208 million gross revenues). U.S. Census Bureau, Table No. EC0751SSSZ5, Information: Subject Series Establishment and Firm Size:

annual gross revenue calculations for firms with 1,500 or less employees far exceed any revenue-based size standard for small businesses adopted or considered by the Commission. Therefore, we submit that the SBA's employee-based size standard is over inclusive and inappropriate, as found in previous deliberations.⁵² Annual gross revenue is the appropriate test for determining small business status in the wireless industry.

In any event, the Commission should continue to reject any DE program standard based on employee levels, and rather adjust the current revenue-based size standards upward as proposed in the 2014 Part 1 NPRM to reflect adjustments in inflation,⁵³ the high cost of providing wireless services,⁵⁴ and the need to foster competition on a local, regional *and* national basis.⁵⁵

Employment Size of Firms for the United States: 2007 (NAICS Code 517210), http://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=ECN_2007_US_51SSSZ5.

⁵² *See supra* note 40.

⁵³ 2014 Part 1 NPRM, 29 FCC Rcd at 12446, ¶ 56. CTI supports the Commission's proposed increase of the current small business revenue thresholds based on the percentage change in the GDP price index between 1997 and 2013. We believe that an adjustment upward since the last time the Commission revised its Part 1 rules is appropriate. Additionally, the range of six years provides a percentage increase that better reflects pertinent changes in the overall economy, certain industry trends, and the growth of broadband services that impacted the broader GDP over that period.

⁵⁴ *Id.* at 12446, ¶ 56 ("We propose to increase the gross revenue thresholds in our Part 1 schedule to reflect the changing nature of the wireless industry, including the overall increase in the size of wireless networks and the increase in capital costs to deploy them. We note that these changes have resulted in an increase in the size of the wireless service providers that can be considered to be 'small' relative to the large nationwide providers. By proposing adjustments to our small business size standards, we aim to promote the effective participation of small businesses in auctions and in the provision of spectrum-based services.").

⁵⁵ *See* DOC Comments at 35 n.103; *see also* Comments of Blooston Rural Carriers, WT Docket No. 14-170 et al. (Feb. 20, 2015), at 8.

There is no doubt that the U.S. wireless market today is highly concentrated among four large incumbent nationwide operators, Verizon, AT&T, Sprint and T-Mobile USA.⁵⁶ Such a market, by its nature, tends to suppress competition through, among other things, the creation of barriers to entry for new competitors. This reality should directly inform the Commission's review of comments submitted in response to the DE PN. The FCC must not take steps that will exacerbate wireless industry consolidation by reducing or cutting off the potential flow of capital to DEs, the proven best source of new entrant competition to today's massive wireless incumbents.⁵⁷

Again, the reality that the level of minority- and women-owned wireless businesses is abysmally low is a *data-driven* fact central to this proceeding.⁵⁸

⁵⁶ In 2013, these four nationwide wireless carriers accounted for almost 96 percent of the nation's mobile wireless service revenues. *See Annual Report and Analysis of Competitive Market Conditions with Respect to Mobile Wireless, Including Commercial Mobile Services*, Seventeenth Report, 29 FCC Rcd 15311, 15325-26, ¶¶ 29-30 & Table II.C.2 (2014). This reality is an integral fact that must be accounted for in any rule change proponent's effort to satisfy the Data-Driven Burden of Proof.

⁵⁷ *See, e.g.*, TARC Reply Comments at 5 ("The initial comments of several parties contain proposals that, if adopted, would exacerbate the excessive concentration of licenses and undermine the dissemination of licenses to DEs. Certain of these proposals are made by nationwide carriers that enjoy the large market share and high margins characteristic of a [sic] industry with an 'excessive concentration of licenses.' These proposals should be rejected.") (footnote omitted); DOC Comments at 14-15 ("Indeed, only qualified, strategically structured, well-capitalized DEs possess the business plan flexibility and financial wherewithal to bring true competition on a national scale to an auction landscape badly in need of it. Critics of DE relationships with even *non-incumbent* businesses have not explained how, given access to capital challenges (as documented and recognized by both Congress and the Commission), DEs would otherwise be able to raise money and fulfill the statutory mandate to avoid an excessive concentration of licenses – *all* licenses, not just small licenses.") (footnote omitted).

⁵⁸ *See supra* note 31. The Commission should address this problem by *increasing* the flexibility of its DE rules (e.g., by repeal of the AMR Rule (*see infra* Section VI)), not by *reducing* it (e.g., by lowering qualifying small business revenue thresholds).

III. DEs Have Allied With Large Investors For Many Years.

One of the primary issues posed by the DE PN is whether the DE Program should continue to promote DE alliances with large investors. But, as noted above, from the inception of the DE program in the early 1990s, the Commission has recognized that in order to fulfill Section 309(j)'s mandates to promote competition, widely disseminate licenses, avoid excessive license concentration, and equitably distribute licenses and services among geographic areas, DEs need access to large amounts of capital.⁵⁹ Indeed, when it structured the DE program to award bidding credits to *small* businesses, the Commission also recognized that such DEs would, as a practical matter, need to enter strategic alliances with large, deep-pocketed investors to be able to compete with large incumbents.⁶⁰ In addition, such alliances would require regulatory predictability⁶¹ and maximal business plan flexibility⁶² in order to have a realistic chance to succeed in the post-auction marketplace. The history of the DE program shows that these initial Commission decisions on these issues have been vindicated, and such alliances have been commonplace over the DE program's more than two decades of existence.⁶³

⁵⁹ See also CTI Reply Comments at n.9 and accompanying text.

⁶⁰ See DOC Comments at 5; TARC Comments, WT Docket No. 14-170 et al. (Feb. 20, 2015), at 25-26.

⁶¹ Proposals reviewed in the DE PN to change the rules of the road for DEs so close to the beginning of the BIA have the potential to destabilize DE business plans relating to that auction, just as the 2006 DE Rules did on the doorstep of Auction 66.

⁶² Even as recently as the 2014 Part 1 NPRM, the Commission has tentatively recognized this factor as one of the reasons to repeal the AMR Rule. See 2014 Part 1 NPRM at 29 FCC Rcd at 12436, ¶ 24.

⁶³ See Exhibit 2 hereto. See also DOC Comments at 12 n.34; TARC Comments at 8-9; and Lawrence J. Spiwak, *How the AWS Auction Provides a Teachable Moment on the Nature of Regulation*, BNA BLOOMBERG (Apr. 29, 2015), available at <http://www.bna.com/aws-auction-provides-n17179925920/> (citing to four examples of precedent for major wireless carriers investing in DEs).

In earlier years of the DE program, the wireless industry, though concentrated with respect to individual regions, was fragmented on a nationwide basis, leading in part to strategic alliances between DEs and companies that have grown into today's large nationwide incumbents.⁶⁴ During those years, the businesses of the companies that are today's large national incumbents were more regional in nature, and the companies were seeking to extend their footprints to a nationwide scope through alliances, joint ventures, and other means, including investments in DEs.

Exhibit 2 hereto provides multiple examples of the DE program's evolution.⁶⁵ For instance, in Auction 35, DE Cook Inlet/VS GSM, LLC allied with large investor VoiceStream (now T-Mobile), resulting in large dollar bids (\$506 million) for PCS spectrum. Another Auction 35 example is the alliance between DE Alaska Native Wireless and large investor AT&T Wireless (resulting in gross winning bids of \$2.960 billion). A third Auction 35

⁶⁴ Prior to Auction 35, VoiceStream (now T-Mobile USA) reported as of July 2000, that its network covered about 33 percent of the country and it had 3,067,900 subscribers as of September 30, 2000, compared to the 55 million subscribers and near nationwide coverage that T-Mobile had as of December 31, 2014. *Compare* Deutsche Telekom AG, Prospectus (Form 425), *available at* <http://www.sec.gov/Archives/edgar/data/946770/000095012300006755/e425pdf.pdf> with VoiceStream Wireless Corp., Quarterly Report (Form 10-Q) (Nov. 14, 2000) *and with* <http://www.sec.gov/Archives/edgar/data/1097609/000089102000002021/v66902e10-q.txt>; Press Release, *T-Mobile US Reports Fourth Quarter and Full-Year 2014 Results* (Feb. 19, 2015), *available at* <http://investor.t-mobile.com/Cache/1001195042.PDF>. AT&T Wireless reported in its December 31, 1999 10K that its network (including its affiliates' networks) covered only 65 percent of the United States. AT&T Corp., Annual Report (Form 10-K) (Mar. 27, 2000) ("AT&T 10-K"), *available at* <https://www.sec.gov/Archives/edgar/data/5907/000000590700000014/0000005907-00-000014.txt>. As of December 31, 1999, AT&T had 12 million wireless subscribers. As of December 31, 2014, by contrast, AT&T had 120.5 million subscribers *and* nationwide coverage. *Compare* AT&T 10-K with AT&T Financial and Operational Results (Jan. 27, 2015), *available at* http://www.att.com/Investor/Earnings/4q14/master_4q14.pdf.

⁶⁵ CTI's Exhibits 2-4 hereto are all *fact-based* and therefore satisfy the DE PN's Data-Driven Burden of Proof on the various issues they address.

illustration is the alliance between DE Salmon PCS, LLC and large investor Cingular (now AT&T) (gross winning bid of \$2.907 billion). In the portion of Auction 58 dedicated solely to DEs, DE Vista PCS, LLC allied with large investor Cellco Partnership d/b/a Verizon Wireless to place gross winning bids of \$332 million for PCS spectrum. In that same auction, DE Carroll Wireless, L.P. partnered with large investor U.S. Cellular to place gross winning bids of \$152.9 million. The data in Exhibit 2 cogently illustrate that past, strategic DE alliances with large investors have not only introduced new ownership into the wireless industry, but that participating large investors have themselves included incumbents like Verizon Wireless, AT&T, T-Mobile, and U.S. Cellular as they sought through alliances and investments to expand and enhance their footprints. But today, as the large incumbents have further consolidated their collective grip on the wireless industry, DE alliances with large investors have evolved to become the only pragmatic way to bring new entrant competition to those same massive companies.⁶⁶

IV. Data-Driven Analysis of the “Bidder Effect” Confirms that DE Bidding in Large Markets Enhances Competition and Produces Substantial Net Revenue Gains.

Although a strong argument exists that Section 309(j)(7) precludes the Commission from weighing the size of bidding credits or their impact on auction revenue,⁶⁷ any focus on revenue “lost” due to the award of bidding credits is misplaced as a matter of revenue-generating fact. That is, viewed in the context of prior large auctions, the results of the last five major spectrum

⁶⁶ See CTI Reply Comments at 2-3. It should also be noted that large incumbents pushing for DE restrictions now previously *opposed* changes that would retard DEs’ ability to enter strategic alliances with large investors and place large-dollar bids at auction. See *id.* at n.10.

⁶⁷ See DE PN at 4, ¶ 8 n.27 and accompanying text. Section 309(j)(7)(A) provides that, in prescribing regulations under Section 309(j)(4)(C), “the Commission may not base a finding of public interest, convenience, and necessity on the expectation of Federal revenues from the use of a system of competitive bidding” See also Section 309(j)(7)(B).

auctions – Auctions 35, 58, 66, 73, and 97 – illustrate a most important and basic auction truism: the addition to the bidder pool of viable, serious bidders incentivized by bidding credits has a salutary effect on spectrum prices, raising them toward true market value (the “Bidder Effect”).

Data-driven analysis, as provided in Exhibit 4 hereto, compels the conclusion that DE participation at high dollar levels generates additional *competition* (a key statutory factor) that in turn produces a healthy return on the government investment which is embodied in bidding credits. A careful, data-driven analysis demonstrates that, holding other variables steady, the absence of active DE bidders would reduce auction revenues by some 50 percent or more. As Exhibit 4 summarizes (at 10): “DEs are the key marginal drivers of pricing.” Other auction statistics are equally stark. With DEs essentially relegated to the sidelines in Auctions 66 and 73 because of the 2006 DE Rules, those auctions generated \$13.7 billion and \$19 billion respectively. But after the Third Circuit restored the potential for viable DE participation in 2010 by setting aside two of the most harmful of those rules, Auction 97 produced a record net of \$41.3 billion, smashing pre-auction consensus estimates. As Exhibit 4 shows, bidding credits of \$3.57 billion yielded a net gain of more than \$20 billion.⁶⁸ The Bidder Effect math is as compelling as it is simple: a viable DE program yielded record Auction 97 revenues, *after* taking the bidding credits into account. And, while the slowed pace of industry concentration resulting from viable DE bidders’ participation in Auction 97 may be a source of consternation

⁶⁸ See also CTI Reply Comments at 6-7.

for large incumbents, which also had to pay the taxpayers more for spectrum than they wanted to pay, it is a reason for celebration by the public which stands to benefit handsomely.⁶⁹

As it looks forward to the BIA and weighs the impact of its decisions in this proceeding with respect to DE bidding in that next major auction, the Commission must consider this factual analysis and what impact new restrictions on large DE bidders would have on auction competition and the other statutory mandates of Section 309(j). The Commission should also consult closely the conclusions of a 2013 study commissioned by Verizon and AT&T and authored by their expert, former FCC Chief Economist Leslie M. Marx (the “2013 Marx Study”).⁷⁰ The Marx Study examines potential restrictions on those two companies’ ability to bid freely in the BIA. The study’s conclusions are in direct line with the Bidder Effect and have direct relevance not only to DE bidding in the BIA, but to the BIA’s ultimate prospects for success. Among the 2013 Marx Study’s findings are:

[t]he literature indicates that *regulators should expect reductions in revenue and the quantity transacted as a result of restrictions on bidders*

⁶⁹ Auction 97’s record revenue results were praised by all five Commissioners. See *FCC Chairman Tom Wheeler Statement on Auction 97* (Jan. 29, 2015), available at https://apps.fcc.gov/edocs_public/attachmatch/DOC-331759A1.pdf; *Statement of Commissioner Mignon L. Clyburn on the Results of AWS-3 Auction* (Jan. 29, 2015), available at https://apps.fcc.gov/edocs_public/attachmatch/DOC-331758A1.pdf; *Statement of FCC Commissioner Jessica Rosenworcel on the AWS-3 Auction* (Jan. 29, 2015), available at https://apps.fcc.gov/edocs_public/attachmatch/DOC-331773A1.pdf; *Statement of Commissioner Ajit Pai on the Completion of the AWS-3 Auction* (Jan. 29, 2015), available at https://apps.fcc.gov/edocs_public/attachmatch/DOC-331762A1.pdf; *Statement of Commissioner Michael O’Rielly on the Conclusion of the AWS-3 Auction* (Jan. 29, 2015), available at https://apps.fcc.gov/edocs_public/attachmatch/DOC-331769A1.pdf.

⁷⁰ Leslie M. Marx, *Economic Analysis of Proposals that Would Restrict Participation in the Incentive Auction*, attached to Letter from Tamara Preiss, Vice President, Federal Regulatory Affairs, Verizon, to Ruth Milkman, Chief Wireless Telecommunication Bureau, Federal Communications Commission, Gary Epstein, Chief, Incentive Auctions Task Force, Federal Communications Commission, and William Lake, Chief, Media Bureau, Federal Communications Commission, GN Docket No. 12-268 (Sept. 18, 2013), available at <http://apps.fcc.gov/ecfs/document/view?id=7520944358>.

at the Incentive Auction. In addition, a reduction in the amount of spectrum transacted in the Incentive Auction means that less spectrum will be reallocated from broadcast use to mobile wireless services. This potentially has broader economic consequences given that there appears to be a consensus that the wireless industry as a whole is likely to suffer from a spectrum shortage as data usage continues to increase. Failure to promote the FCC's goal in its National Broadband Plan to repurpose a substantial amount of spectrum for wireless operations could lead to higher prices for consumers, reduced quality of services, and stalled innovation.⁷¹

Economic theory supports the intuitive conclusion that a seller should be able to raise more money when running an auction that does not exclude any bidder than an auction that excludes even a single bidder. Bulow and Klemperer (1996) prove a theorem that shows that, when the auctioneer's goal is to raise the highest amount of money possible, "an auction with $N + 1$ bidders beats any standard mechanism for selling to N bidders."⁷²

Brannman, Klein, and Weiss (1987) show that having more bidders results in higher winning bids both in theory and in the data in a range of different auction settings, including underwriters' spreads on tax-exempt general obligation bonds and on tax-exempt revenue bonds, U.S. Department of Interior offshore oil lease auctions, and oral ascending and sealed-bid auctions of National Forest Service timber in the Pacific Northwest.⁷³

Given the unanimity of the fact-based, data-driven conclusions reached by CTI, Professor Marx, Verizon, and AT&T as to the impact of the Bidder Effect on FCC spectrum auctions, an inescapable conclusion emerges – the current level of DE auction participation, and the competition it brings, should be preserved or improved going forward, not restricted or cut back. Polemical proposals for DE rule revisions (discussed in the next Section), which are not based on data-driven analysis, must fail.

⁷¹ *Id.* at 3 (emphasis added).

⁷² *Id.* at 23 (emphasis added).

⁷³ *Id.* at 24.

V. Proposals to Limit the DE Program Are Thinly Disguised Efforts to Permanently Disable DE Bids at Higher Dollar Levels and Stifle Competition.

The DE PN seeks comment on numerous proposals advanced by DE critics suggesting ways to revise the DE program (the “Revision Proposals”), primarily submitted by Auction 97 bidders or would-be participants unhappy with the competitive results of that auction. They either wanted to win more spectrum, and/or paid more than they wanted to for the spectrum they acquired.⁷⁴ Some of the Revision Proposals are timeworn and have already been rejected by the FCC or vacated by reviewing courts;⁷⁵ others are new. But they share certain characteristics: they are not grounded in data, they serve no public policy goals, and they are bereft of support in statutory and Commission precedent.⁷⁶ If adopted, any one of these proposals would effectively kill off in future spectrum auctions the viability of New Entrant DE hopefuls and assure the continued dominance of the large incumbents.

The Revision Proposals are primarily championed by large incumbents and fall into several categories, such as: (1) limiting the size of the companies and investors with which DEs may strategically ally themselves⁷⁷ or the percentages of equity any large investor may acquire in

⁷⁴ CTI notes that such reactions should be accorded no weight. They are a natural byproduct of robust auction competition and are routinely experienced by participants in auctions of all types.

⁷⁵ See CTI Reply Comments at 5-6 n.11 and accompanying text (FCC in 2000 purposefully eliminated DE minimum equity holding requirements). See also *id.* at 2-3 (Third Circuit vacatur of Ten Year Hold Rule and 50 Percent Rule).

⁷⁶ For example, to satisfy the Data-Driven Burden of Proof, bare calls for changes in how the FCC awards DE bidding credits are inadequate. They must identify a fact-based problem and show how a proposed change will solve that problem, without disrupting the delicate balancing of multiple factors Section 309(j) requires.

⁷⁷ DE PN at 5, ¶ 10 n.38 and accompanying text (*T-Mobile* proposal).

a DE;⁷⁸ (2) limiting the dollar amount of any winning bid to which any bidding credit would apply⁷⁹ or the total amount any DE could bid;⁸⁰ and (3) imposing special rules on DEs that will tilt the playing field against them.⁸¹

Merely stating these proposals is enough to lay bare their obvious purpose – to starve DEs of the capital necessary to place bids at auction, often measured today in billions, that would be realistically competitive to the large incumbents. Adoption of any one of them would be fatal to DEs’ ability to raise the capital necessary to compete with the large incumbents at auction and would effectively insulate the large incumbents from the auction competition in higher-priced markets DEs would otherwise be in position to provide. That is, if a Revision Proposal dictates that DEs’ strategic allies must be small, the capital available to DEs would be correspondingly small, thereby keeping DEs out of the major markets, and such DEs would pose no threat to the large incumbents. If DEs’ bidding credits are to be capped at low levels, large investors would have no incentive to ally with them, and would instead choose not to invest their capital in auctions. If DEs are required to comply with onerous special buildout or other rules uniquely applicable to them, their licenses will be less valuable and investor capital will be even more difficult to obtain. The history of the 2006 DE Rules and the ensuing Auctions 66 and 73

⁷⁸ *Id.* at 5, ¶ 10 n.35 and accompanying text (*AT&T* proposal to cap a large investor’s interest in a DE at 10 percent) and at n.40 and accompanying text (*T-Mobile*’s proposed rebuttable presumption that equity interests of 50 percent or more constitute control of a DE). *See also id.* at 6, ¶ 10 n.41 and accompanying text (*T-Mobile*’s proposal to, inter alia, adopt a 25 percent minimum equity requirement for DEs).

⁷⁹ *Id.* at 6, ¶ 10 n.42 and accompanying text (*T-Mobile* proposal to cap bidding credits at \$32.5 million).

⁸⁰ *Id.* at 6, ¶ 10 n.44 and accompanying text (taxpayer proposal to cap DE bids at a small business revenue multiple).

⁸¹ *Id.* at 8, ¶ 16 n.66 and accompanying text (*T-Mobile* proposal to require DEs to demonstrate “tangible steps toward deployment” within one year of license acquisition.).

demonstrates that it is highly likely, if not a virtual certainty, that, without meaningful incentives to participate in auctions, large investors will *not* take up the challenge to enter the competitive ring with entrenched, deep-pocketed incumbents that already enjoy a wealth of marketplace advantages (e.g., economies of scale, ubiquitous storefront presence, millions in marketing/advertising budgets).⁸² In this case, an opportunity for the FCC to foster competition will have been lost.

The DE PN also seeks additional comment on the issue of whether changes to the current five-year unjust enrichment schedule should be made. CTI and a number of commenters have already opposed any such change.⁸³ Nonetheless, the DE PN asks whether some variant of the Ten Year Hold Rule vacated by the *Council Tree* Court should be reinstated.⁸⁴ But not only was the Ten Year Hold Rule set aside by the Court on inadequate notice grounds, it was, as Commissioner Clyburn notes, substantively criticized by the Court for its obvious potential to drive away potential investors in DEs.⁸⁵ Put simply, lengthening the unjust enrichment penalty period will devastate DEs' access to capital. The record contains no data or empirical evidence

⁸² See H.R. REP. NO. 103-111, at 255 (“One of the primary criticisms of utilizing competitive bidding to issue licenses is that the process could inadvertently have the effect of favoring only those with ‘deep pockets,’ and therefore have the wherewithal to participate in the bidding process. This would have the effect of favoring incumbents, with established revenue streams, over new companies or start-ups.”). It is telling that T-Mobile, a one-time DE that has now grown to be a large incumbent, supports Revision Proposals which, had they been in place during the early years of the DE program, would have prevented T-Mobile from coming into existence.

⁸³ CTI Reply Comments at 11-12; CCA Comments at 10; Comments of the Wireless Internet Service Providers Association (“WISPA”), WT Docket No. 14-170 et al. (Feb. 20, 2015), at 13-14; Comments of Rural Wireless Association, WT Docket No. 14-170 et al. (Feb. 20, 2015), at 9-11.

⁸⁴ DE PN at 8, ¶ 15.

⁸⁵ See DE PN at 26 (Statement of Commissioner Mignon L. Clyburn) and CTI Reply Comments at 10 n.23.

suggesting otherwise. No rational investor will agree to lock up its capital for a span of time anywhere near ten years. The large incumbents, with their extensive investment savvy, know that the 2006 DE Rules (including the Ten Year Hold Rule) effectively decimated DE participation in Auctions 66 and 73, so their support for its reinstatement now is transparently anti-competitive. The public interest demands that calls for any increases in the length of the unjust enrichment schedule be summarily rejected. The same conclusion applies to any suggestion that the 50 Percent Rule, also vacated and criticized on substantive grounds by the *Council Tree* Court, be reinstated.⁸⁶ Like the Ten Year Hold Rule, the 50 Percent Rule effectively killed off investment in DE startups by forcing DEs to contemplate executing the impossible – the launch from scratch of the most expensive type of wireless business (retail) to compete against the large incumbents, with their dominant market positions and built-in competitive head start.

The DE PN asks, in effect, whether the flow of any part of the benefit of a bidding credit to a large investor would constitute “unjust enrichment” within the meaning of Section 309(j), improperly conferring benefits on ineligible entities.⁸⁷ First, there can be nothing “unjust” about the award of bidding credits to an entity which meets the Commission’s “longstanding controlling interest and affiliation rules.”⁸⁸ This of course includes the many DEs which have strategically allied themselves in the past with large investors in order to gain access to the capital necessary to compete in the highly concentrated wireless industry.⁸⁹ For such a DE to be

⁸⁶ See DE PN at 3, ¶ 6 n.19 and accompanying text.

⁸⁷ DE PN at 3-5, ¶¶ 5,8, 10.

⁸⁸ See DE PN at 2, ¶ 4.

⁸⁹ See *supra* pages 22-24.

eligible for a bidding credit, it must demonstrate to the FCC's satisfaction post-auction that it "retains control over the spectrum associated with the licenses for which it seeks small business benefits."⁹⁰ When this test is satisfied, the bidding credit as a whole flows "justly" to the entity as a whole. In such cases, the bidding credit has properly incentivized a properly structured DE. Second, a DE which still pays millions or even billions (even after the award of a bidding credit) in order to take a chance on bringing beneficial competition to a highly concentrated industry (despite the substantial competitive obstacles that DE faces) is not "enriched" by the bidding credit. Rather, it is merely given a fighting chance to successfully compete.⁹¹

VI. The AMR Rule.

CTI reiterates its support for repeal of the AMR Rule. For reasons articulated in the 2014 Part 1 NPRM in support of the AMR Rule's tentative repeal,⁹² as well as in numerous comments submitted in response thereto,⁹³ the AMR Rule unreasonably obstructs valid DE business plans that clearly serve the public interest.

⁹⁰ DE PN at 2, ¶ 4 (footnote omitted).

⁹¹ A bidding credit is by no means a "windfall," nor is an authorization which a DE wins a "full value" license. It comes with unique limitations. For example, as discussed above, unlike large incumbents that win spectrum at auction, eligible DEs are governed by a five-year post-auction unjust enrichment period. CTI also notes that unsupported and unexplained claims of unjust DE enrichment in this proceeding come nowhere close to satisfying the Data-Driven Burden of Proof.

⁹² 2014 Part 1 NPRM, 29 FCC Rcd at 12434-37, ¶¶ 20-25.

⁹³ CTI Reply Comments at 9-10; *see also* TARC Comments at 17-18; CCA Comments at 9; DOC Comments at 16-18; NTCA Comments at 5-6; WISPA Comments at 10-11; TARC Reply Comments at 8; and Reply Comments of CCA, WT Docket No. 14-170 et al. (Mar. 6, 2015), at 3. CTI also agrees with the DOC Comments' discussion regarding the Commission's erroneous interpretation of the legislative history's phrase "service to the public" to mandate that DEs must be facilities-based and thus, are required to engage in retail service direct to the public. DOC Comments at 19-21. CTI adds that the phrase "service to the public" was used in the same House Report in an earlier section discussing Congress' concern about an incumbent having the ability to stockpile or warehouse licenses for anti-competitive reasons. H.R. REP. NO. 103-111,

CTI takes this opportunity to emphasize, in particular, that continued application of the AMR Rule to DE wholesaling makes no sense whatsoever. Indeed, when the *facts* underlying DE wholesaling are considered and weighed, the Data-Driven Burden of Proof is easily satisfied. That is, pursuant to a wholesaling model, a New Entrant DE constructs new facilities – by definition, a pro-competitive act. The proliferation of such separately owned and controlled wireless facilities directly benefits consumers by creating new wireless infrastructure for use by the competitors of large incumbents. In a wholesaling scenario, the AMR Rule simply serves no valid public policy purpose, and improvidently limits the business plan flexibility of any New Entrant DE that expends the resources to build out facilities. Where new facilities are to be constructed and wholesaling employed, there is clearly no need for further FCC regulatory involvement, in the form of the AMR Rule or otherwise.

* * *

With release of the DE PN, the FCC has placed itself squarely at a DE program crossroads. One direction (adoption of one or more of the Revision Proposals) leads backwards toward the FCC’s fateful and improvident 2006 decision to place shackles on DEs in the form of rules and restrictions which vitiated the utility of bidding credits. As a consequence, DEs’ access

at 256 (“The Committee’s record demonstrates that there is a potential for applicants to acquire licenses pursuant to a competitive bidding process for a purpose other than delivering a service to the public. For example, an incumbent service provider could submit a bid for a license in a service that would compete with an existing business, and engage in behavior that would prevent competitive from occurring. This would deny the public of both the benefit of having access to then new service, and the benefits of competition.”). Congress’ use of that phrase was to compare an auction winner using the spectrum as opposed to sitting on it to the detriment of other potential competitors, whether they are engaged in leasing, reselling or wholesaling. There is no discussion as what service to the public includes – or excludes. But in light of Congress’ concerns about new entrants’ access to capital, it is highly unlikely that Congress expected that new entrants must provide the most expensive type of service in the wireless industry – retail. *See, e.g., supra* note 21. This further supports the conclusion that the Commission’s revised analysis of its interpretation of the phrase “service to the public” is overly narrow.


to capital disappeared, and the large investors needed to bring competition to the large incumbents were driven away. Furthermore, overall spectrum prices were depressed and consolidation was accelerated, to the detriment of the public and to the direct benefit of the large incumbents. The *other* direction (maintaining and strengthening the DE program which produced the record Auction 97 results) points toward a future of vibrant DE auction participation at the highest dollar levels, marked by increased auction revenues, energized marketplace competition, and lessened industry concentration, to the demonstrable benefit of the taxpaying and consuming public.

VII. Conclusion.

For all of the reasons set forth herein and in the CTI Reply Comments, CTI strongly urges the Commission to take steps in this proceeding to preserve and enhance a robust DE program, one that, going forward, will fulfill the mandates of Section 309(j) and promote competition, through the wide dissemination of licenses, the avoidance of license concentration, and the equitable distribution of licenses and services among geographic areas.

Respectfully submitted,

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May 14, 2015

Its Attorneys

EXHIBIT 1
CTI Reply Comments

**Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554**

In the Matter of)	
)	
Updating Part 1 Competitive Bidding Rules)	WT Docket No. 14-170
)	
Expanding the Economic and Innovation Opportunities of Spectrum Through Incentive Auctions)	GN Docket No. 12-268
)	
Petition of DIRECTV Group, Inc. and EchoStar LLC for Expedited Rulemaking to Amend Section 1.2105(a)(2)(xi) and 1.2106(a) of the Commission's Rules and/or for Interim Conditional Waiver)	RM-11395
)	
Implementation of the Commercial Spectrum Enhancement Act and Modernization of the Commission's Competitive Bidding Rules and Procedures)	WT Docket No. 05-211
)	
To: The Commission		

REPLY COMMENTS

COUNCIL TREE INVESTORS, INC.

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SUMMARY

In these Reply Comments, Council Tree Investors, Inc., a company that has long been active in spectrum auction proceedings at the FCC, briefly reviews the background of the FCC's Designated Entity ("DE") program, debunks two myths currently trying to gain circulation that DEs should only make small bids at auction and that DE bidding credits damage taxpayers, and offers an illustrative analysis of why the comments submitted by pro-DE commenters in this proceeding have merit, whereas those offered herein by large incumbents and their supporters do not. These reply comments also show that the robust, record-setting results of recently-completed Auction 97 compellingly illustrate why a viable DE program very much enhances competition, benefits the American consumer and taxpayer, fulfills the mandates of Section 309(j) of the Communications Act, and serves the overall public interest. Changes to facilitate the growth of the DE program should be adopted. Those which are intended to clip the DE program's wings should be rejected.

**Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554**

In the Matter of)	
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To: The Commission

REPLY COMMENTS

Council Tree Investors, Inc. ("Council Tree"), by its attorneys, hereby submits its reply comments in the above-captioned proceeding.¹

I. Background.

Against a historical backdrop of more than twenty years' duration, the FCC has undertaken in the above-captioned proceeding a review of the competitive bidding rules which

¹ Council Tree is an investment company organized to identify and develop communications industry investment opportunities for the benefit of small businesses and new entrants, including those owned by members of minority groups and women. The company brought the legal challenge to the 2006 DE Rules (defined below) which vacated two of those three rules. *See Council Tree Commc'ns, Inc. v. FCC*, 619 F.3d 235, 259 (3d Cir. 2010), *cert. denied sub nom. Council Tree Investors, Inc. v. FCC*, 131 S. Ct. 1784 (2011) ("*Council Tree*"). The principals in Council Tree collectively own an indirect 5.3% minority equity interest in Northstar Manager LLC, the manager and controlling shareholder of Northstar Spectrum, LLC, in turn the manager and controlling shareholder of Northstar Wireless LLC, which participated in Auction 97.

govern spectrum auctions. In August 1993, Congress authorized the FCC to distribute spectrum through auctions.² At that time, Congress charged the Commission with the responsibility of creating an auction design that, among other things, counterbalances auctions' tendency to favor deep-pocketed bidders, such as large incumbent wireless companies that possess massive marketplace advantages of scale. Congress embedded this vital objective within Section 309(j) in two primary ways – Section 309(j) tasked the FCC with the obligation to widely distribute licenses among small businesses, including minority- and women-owned businesses, and rural telephone companies,³ and the statute directed the agency to avoid an excessive concentration of licenses.⁴ In the early years following passage of the legislation, the FCC utilized various measures in pursuit of these key objectives (e.g., conducted auctions that were closed to the large incumbents, tried installment payment plans). By 2006, however, the agency had eliminated all incentives except for the award of bidding credits in varying percentages to small businesses known as Designated Entities (“DEs”)⁵ as the sole tool it would employ in an effort to level the auction playing field for those trying to compete against the large incumbents.

In 2006, on the doorstep of Auction 66, without providing advance notice and the opportunity to comment, the FCC adopted a series of severe new DE restrictions (the “2006 DE Rules”) that crippled DEs’ business plan flexibility and sent potential DE strategic partners and investors streaming for the exits, effectively eviscerating the DE program’s ability to produce

² See Omnibus Budget Reconciliation Act of 1993, Pub. L. No. 103-66, § 6002, 107 Stat. 312, 387-392, codified at 47 U.S.C. § 309(j) (“Section 309(j)”).

³ 47 U.S.C. § 309(j)(3)(B).

⁴ *Id.*

⁵ The FCC has specified varying gross revenue tests which define different levels of qualifying small business DEs.

any meaningful level of auction competition from DEs.⁶ With the 2006 DE Rules in place, major spectrum Auctions 66 (2006) and 73 (2008) witnessed historically low levels of DE participation⁷ and parallel domination by the large incumbents. In 2010, in *Council Tree*, the United States Court of Appeals for the Third Circuit vacated two of the most onerous of the 2006 DE Rules, setting the stage for the return of viable DE participation in Auction 97.

In the fall of 2014, as planning for the Broadcast Incentive Auction (“BIA”) moved forward, the FCC commenced the above-captioned reexamination of its competitive bidding rules. The FCC therein undertook a careful reexamination of the legal underpinnings of the DE program as part of an exploration of how best to enhance DE effectiveness in auctions and made several tentative endorsements, such as repeal of the AMR Rule, the one remaining 2006 DE

⁶ The three primary 2006 DE Rules were:

(1) the “Ten Year Hold Rule,” which doubled the unjust enrichment penalty repayment period after auction from five to ten years and made corresponding changes in the related schedule of graduated repayment penalties over those ten years, including the imposition of a 100 percent bid credit repayment obligation (plus interest) during the first five years. *See* 47 C.F.R. § 1.2111(d)(2)(i) (2006) (vacated 2010);

(2) the “50 Percent Rule,” which eliminated DE eligibility altogether for any entity that leased or resold (including on a wholesale basis) to third parties more than 50 percent of the aggregate spectrum capacity won at auction. *See* 47 C.F.R. § 1.2110(b)(3)(iv)(A) (2006) (vacated 2010); and

(3) the “Attributable Material Relationship Rule” (hereinafter referred to as the “AMR Rule”), which effectively limited DEs to leasing or reselling (including on a wholesale basis) to any single third party no more than twenty-five percent of the aggregate spectrum capacity won at auction. The rule accomplished this result by attributing to each DE the gross revenues of any company to which it leased or resold this amount of spectrum capacity, which would in most cases have the effect of putting the DE’s gross revenues above the maximum level permitted for DE status eligibility. *See* 47 C.F.R. § 1.2110(b)(3)(iv)(B) (2006).

⁷ DEs, for example, won only 4 percent of the total value of the licenses sold in Auction 66 and even less, just 2.6 percent of that value, in Auction 73. *See Council Tree*, 619 F.3d at 248.

Rule which continued to hamper DEs' ability to participate robustly in spectrum auctions. The FCC also posed a series of questions on such issues as whether to increase DE bidding credit percentages and whether to increase qualifying DEs' gross revenue thresholds.

What began in October 2014 as a high-level FCC exercise in evaluating potential changes to the Designated Entity ("DE") Rules in advance of the BIA also created, by the extended deadline of February 20, 2015, an opportunity for comment on the actual performance of DEs in the AWS-3 Auction 97 which concluded on January 29, 2015. That auction raised a net total of \$41.3 billion, smashing pre-auction revenue estimates, to a chorus of acclaim.⁸ Among the February 2015 group of commenters, consensus emerged that the presence of DEs in Auction 97 was the driving force behind the record-setting amounts bid in Auction 97. A review of the comments confirms broad agreement on this key point. Sharp divergence emerged, however, over whether and how the existing DE Rules should be changed in advance of the BIA.

II. Several Myths Need to Be Pierced.

At the threshold, Council Tree believes it important to address two post-Auction 97 myths. The first is that the DE program is only supposed to facilitate small businesses making small bids in spectrum auctions. The second is that the award of bidding credits ultimately hurts taxpayers. Each myth is readily debunked.

A. The myth that DEs should only make small bids. Section 309(j)'s twin goals of wide license dissemination and avoidance of excessive license concentration would be gutted if the FCC designed a DE program merely to facilitate *small* auction bids by DEs (e.g., for small markets or small spectrum blocks). The FCC has long recognized the importance of this issue. That is, from its inception, the DE program has been designed to produce viable competition to

⁸ See Comments of the DE Opportunity Coalition ("DOC"), Feb. 20, 2015, at nn.29 & 30 and accompanying text.

the large incumbent companies that have the incentive and potential to dominate the auction landscape with their entrenched market positions and vast financial resources. Indeed, as far back as 1994, the FCC stated that:

First, we will structure our attribution rules to allow *those extremely large companies* that may not bid on [PCS] blocks C and F to invest in entities that bid on those blocks. . . . Second, *to encourage large companies to invest in designated entities* and to assist designated entities without large investors to overcome the additional hurdle presented by auctions, we will make bidding credits available to designated entities. . . .⁹

And, as the materials attached hereto (“Presentation”) makes clear, the history of the DE program demonstrates that billions of dollars in large DE bids have been made over the more than two decades since the adoption of Section 309(j), redounding to the benefit of competition and the public interest.¹⁰ In 2000, given its experience with ownership restrictions hampering DE success, the FCC purposefully eliminated DE minimum equity holding requirements in favor

⁹ *Implementation of Section 309(j) of the Communications Act – Competitive Bidding*, Fifth Report and Order, 9 FCC Rcd 5532, 5539 ¶¶ 14-15 (rel. July 15, 1994) (emphasis added).

¹⁰ See Presentation at 5. See also Comments of The Auction Reform Coalition (“TARC”), Feb. 20, 2015, at 4-9; DOC Comments at 12 n.34. As the Presentation also makes clear, large incumbents have themselves historically partnered with DEs. In this regard, it is noteworthy that in the rulemaking proceeding that led to the adoption of the 2006 DE Rules, large incumbents strongly defended the legality and public interest benefits of DE strategic alliances with large companies: “It is not clear what ills the Commission is attempting to redress in this proceeding.” Comments of Verizon Wireless, WT Docket No. 05-211 (Feb. 24, 2006) at 2. “The Further Notice fails to come close to demonstrating the requisite clear cut need for new restrictions on only DE applicants for spectrum that partner with specific carriers.” *Id.* at 16. “A DE can be bona fide even if it benefits from a large carrier’s investment; conversely, prohibiting investment by a large wireless carrier has nothing to do with ensuring a DE is bona fide.” *Id.* at ii. “T-Mobile does not believe that the changes [then] proposed to the DE rules are either warranted or wise.” Comments of T-Mobile USA, Inc., WT Docket No. 05-211 (Feb. 24, 2006) at 1. “[T]he proposed rule revisions will undermine Congress’s directive that the Commission prescribe regulations that ‘ensure that small businesses, rural telephone companies, and businesses owned by members of minority groups and women are given the opportunity to participate in the provision of spectrum-based services.’ From the inception of the DE program, the Commission has recognized that small businesses lack the ability to bid for and win spectrum, much less construct wireless networks, absent significant financial resources and operational support from established companies.” *Id.* at 9 (quoting 47 U.S.C. § 309(j)(4)(D)).

of a controlling interest standard, predicated on analysis of de jure and de facto control.¹¹ Very recently, Commissioner Pai, in a statement otherwise criticizing certain aspects of Auction 97, acknowledged that a critical purpose of the DE program is to bring competition to the “large” incumbent companies.¹² Given these substantial and well-grounded public interest goals, it is hardly surprising that the DE program has historically favored (with the exception of the unfortunate reign of the 2006 DE Rules during the 2006-2010 period) strategic alliances between controlling party DEs and larger companies and investors. Realistic business plans necessarily depend on such strategic alliances with larger companies that can help provide the dollars necessary to fuel viable competitive bids at auction. Council Tree knows of no other business model by which DEs could realistically compete at the higher bid levels (e.g., in mid- and large-sized markets that need new entrant DE competitions).

B. The “damage to taxpayers” myth. Critics posit that taxpayers were hurt by the post-Auction 97 award of bidding credits.¹³ The basic math of Auction 97 teaches otherwise. Predictions in advance of Auction 97 estimated its proceeds at some \$18 billion.¹⁴ Those projections were logically predicated in part on the monetary results of the then-most recent large spectrum auctions, Auctions 66 (\$13.7 billion) and 73 (\$19.1 billion). But the overlooked wildcard was the resuscitation of the DE program after the 2010 court ruling in *Council Tree*. Incentivized by the DE bidding credit, and with a viable business plan again possible, DEs again

¹¹ See DOC Comments at n.42 and accompanying text.

¹² See *Statement of Commissioner Ajit Pai on Abuse of the Designated Entity Program*, Feb. 2, 2015, available at <http://www.fcc.gov/document/commissioner-pai-statement-abuse-designated-entity-program> (last visited Mar. 3, 2015) (“Pai Statement”).

¹³ See Pai Statement; Comments of MediaFreedom.org, Feb. 20, 2015, at 2; Comments of Thomas A. Schatz, President, Citizens Against Government Waste, Feb. 20, 2015, at 3.

¹⁴ See Presentation at 3 and accompanying text quoting Commissioner Clyburn.

entered the bidding pool and drove Auction 97 revenues toward true market value, some \$23 billion above the level that Auction 97 was positioned to find if DEs were still sitting on the sidelines. So, from the vantage point of the taxpayer, bidding credits to DEs produced a \$23 billion surplus over expected results. Phrased simply, the DE program is a money-maker for the taxpayer. This point has long been recognized by auction experts, and was well articulated in a 1996 article published in the Stanford Law Review:

The FCC's affirmative action has been criticized as a huge giveaway, but this article will show that the bidding preferences increased the government's revenues [in Auction 3] by 12% - an increase in total revenues of nearly \$45 million. Although at first blush it seems that allowing designated entity bidders to pay fifty cents on the dollar would necessarily reduce the government's revenue, we will show that *subsidizing designated entity bidders created extra competition in the auctions and induced the established, unsubsidized firms to bid higher. . . .*

The extra revenue the government earned from unsubsidized winning bidders . . . more than offset the subsidy to the designated bidders. Far from being a giveaway, affirmative action bidding preferences *induced competition that prevented established firms from buying the airwaves at substantial discounts. . . .*¹⁵

III. Analysis of the Sharp Divide in the Comments Over DE Rule Revisions Strongly Favors the Pro-DE Commenters.

As noted above, there is a major fault line in the comments over how to revise the DE Rules. Pro-DE commenters argued strongly that changes like AMR Rule repeal, increased DE bidding credit percentages, and increases in gross revenue thresholds for qualifying DEs are needed to encourage even more robust DE participation in the BIA than occurred in Auction 97. These commenters found restoration of a ten-year unjust enrichment penalty period, on the other hand, to be a complete non-starter, as history shows it would have the same devastating effect on

¹⁵ Ian Ayres & Peter Cramton, *Deficit Reduction Through Diversity: How Affirmative Action at the FCC Increased Auction Competition*, 48 STANFORD L. REV. 761, 762, 780 (1996) (emphasis added).

DEs as the very same rule (the Ten Year Hold Rule) did in 2006. Pro-DE commenters cogently showed that the presence of viable DE bidders in Auction 97 produced a classic “*win/win*,” in a manner consonant with Section 309(j)’s public policy goals (wide distribution of licenses and avoidance of excessive industry concentration). That is:

- **Marketplace competition won** because in Auction 97 DEs collectively acquired 25.9 percent of the auctioned spectrum, a substantial increase over the DE results of Auction 73. The flip side of this result is equally positive: in sharp contrast to Auction 73 (84.4 percent of the spectrum value went to the two largest incumbents), the trend toward concentration of licenses was at least mitigated.
- **The Treasury and taxpayers won**, as the dollars raised not only fund beneficiaries like FirstNet and the Spectrum Relocation Fund,¹⁶ but allow a multi-billion dollar payment to be made to the U.S. Treasury.¹⁷ Analysis indicates that the increase attributable to viable DE participation exceeded \$23 billion.¹⁸

Various pro-DE commenters take a well-supported, balanced approach in their comments. For example, DOC and TARC both take pains to set their pro-DE positions in historical context. DOC’s comments are particularly cogent in demonstrating how the revival of a viable DE program in advance of Auction 97 ultimately served the twin statutory goals of wide license dissemination and avoidance of excessive license concentration, and they illustrate through the interweaving of reports on interviews with DE entrepreneurs why past agency missteps (particularly the 2006 DE Rules) must not be repeated. TARC does an excellent job

¹⁶ See DOC Comments at nn.27 & 28.

¹⁷ See Presentation at 5.

¹⁸ \$23.3 billion is the excess of Auction 97’s \$41.3 billion net proceeds over the \$18 billion pre-auction analyst estimates. In addition, an apples-to-apples *AWS spectrum auction* comparison can be made between Auctions 66 and 97. 90 MHz of paired AWS spectrum was sold in Auction 66 (when the restrictive Rules sidelined DEs) for \$13.7 billion. In Auction 97, with viable DEs back in the bidder pool, 65 MHz of AWS spectrum (only 50 MHz of which was paired) sold for \$41.3 billion. *So, in Auction 97 the FCC received \$27.6 billion more than it received for 25 MHz less of AWS spectrum in Auction 66.*

both of reviewing examples of past DE successes and growth demonstrating how a vibrant DE program can facilitate competition, and of tying their recommendations to goals articulated by Congress (e.g., increased bidding credits for DEs).

In sharp contrast, on the other side of the comment chasm, large incumbent wireless companies and their supporters (“Incumbents”) generally seek to eliminate the flexibility DEs enjoyed in Auction 97 and in auctions *before* 2006 to ally themselves with larger companies. To accomplish their goal, the Incumbents propose a wide range of measures, the adoption of any one of which would be enough to put DEs back on the sidelines to which they were relegated for Auctions 66 and 73, where DEs would pose no competitive threat.¹⁹ But the only discernible support for their proposals is the Incumbents’ self-interest, making obvious the reason for their DE-debilitating requests – if they were to succeed in eliminating DE bidding at the higher levels, *they would be able to acquire much more BIA spectrum for much less money*. If any one of their proposals were to be adopted, Incumbents would walk away winners, to the demonstrable detriment of competition, the U.S. Treasury, the U.S. taxpayer, consumers, Section 309(j) mandates, and the overall public interest.

Specifically, the Incumbents offer a smorgasbord of ideas for how to change the DE program. As noted above, adoption of any of these proposals would devastate the DE program in advance of the BIA, as even a cursory review reveals.²⁰

One Incumbent suggests that the FCC not only preserve the AMR Rule, but “strengthen it to prohibit [DEs] from leasing more than 25 percent of their spectrum in the aggregate, across

¹⁹ These proposals represent an abrupt course reversal from the positions taken by large incumbents in the FCC proceeding that led to adoption of the 2006 DE Rules. *See supra* n.10.

²⁰ Council Tree does not endeavor to identify and rebut herein each and every proposal in the comments which imperils DEs’ future viability, but strongly urges the FCC to scrutinize and reject all such proposals.

one or more lessees.”²¹ This proposal not only flies in the face of the NPRM’s tentative endorsement of *repeal* of the AMR Rule,²² it goes far beyond even the vacated and discredited 50 Percent Rule which was improvidently and unlawfully adopted by the FCC in 2006.²³ If DEs were restricted to 25 percent leasing *in the aggregate*, DEs would effectively be required to find another use for the remaining 75 percent of their spectrum capacity,²⁴ an impossible hurdle for a new entrant hoping to find a realistic way to compete against entrenched incumbents, with their enormous marketplace advantages. Business plan flexibility provides essential “oxygen” to DEs. Without it, they cannot access capital and are doomed to failure. Adoption of this proposal would immediately staunch DEs’ flow of future capital and their ability to develop viable business plans based on industry-standard relationships.

²¹ See Comments of T-Mobile USA, Inc. (“T-Mobile”), Feb. 20, 2015, at 4.

²² Council Tree strongly supports AMR Rule repeal, and endorses the following comments on this issue: TARC Comments at 17-18; Comments of Competitive Carriers Association (“CCA”), Feb. 20, 2015, at 9; DOC Comments at 16-18; Comments of NTCA-The Rural Broadband Association (“NTCA”), Feb. 20, 2015, at 5-6; Comments of the Wireless Internet Service Providers Association (“WISPA”), Feb. 20, 2015, at 10-11.

²³ The Court in *Council Tree*, *supra*, for example, said of the 50 Percent Rule: “[T]he FCC does not appear to have thoroughly considered the impact of the extended [ten year] repayment schedule on DEs’ ability to retain financing.” 619 F.3d at 256 n.10. It further found that the Commission was “confused” about “the maximum period for which investors are willing to lock up their capital (before being able to liquidate the spectrum license, in the event the DE proves unprofitable). . . .” *Id.* Likewise, the court criticized the agency’s “inattention to the nature of the wireless wholesaling business,” in which a DE would “build and operate” new, wireless transmission facilities and then sell that new capacity to other existing companies, thereby promoting competition. *Id.* at 255 n.8.

²⁴ Implicit in such an approach is a desire to force new entrant DEs to start up a business with an outsized, immediate, and prohibitively expensive *retail* component and presence, which of course cannot realistically be accomplished in the face of incumbents’ ubiquitous storefronts, media advertisements, etc. Mandated retail service would also contravene the FCC’s obligation to identify and eliminate market entry barriers under 47 U.S.C. § 257.

Similarly unavailing is an Incumbent proposal that the FCC adopt a ten-year unjust enrichment period for DEs that calls for full reimbursement of all bidding credits, plus interest and a penalty, if a license acquired with a DE bidding credit is transferred anytime within the ten-year period.²⁵ This proposal goes beyond re-imposition of the Ten Year Hold Rule which had been criticized and vacated by the Third Circuit in 2010,²⁶ a rule which quite effectively shelved DE business plans for Auctions 66 and 73. While the Ten Year Hold Rule allowed for graduated bidding credit repayment during years 6 through 10, this new proposal would nail the DE coffin even more tightly shut. As multiple commenters have made clear,²⁷ re-imposition of the Ten Year Hold Rule, much less the more severe version advocated by the Incumbents, would be debilitating for investors and effectively end DE bidding at the higher levels. Council Tree strongly opposes its reinstatement and, indeed, any extension of the already more than adequate five-year unjust enrichment period currently in force.²⁸

Other Incumbent-suggested changes in the DE Rules would put DEs into an inescapable box from which they could never again threaten dominant positions in the industry. That is, limiting a DE's bidding credits to \$32.5 million in any given auction, and/or making attributable for gross revenue calculation purposes all ten percent or greater equity holders in a DE,

²⁵ See T-Mobile Comments at 5.

²⁶ *Council Tree*, 619 F.3d at 259.

²⁷ See CCA Comments at 10; DOC Comments at 26-33; Comments of Rural Wireless Association, Feb. 20, 2015, at 9-11; and WISPA Comments at 13-14.

²⁸ Other Incumbent proposals for new rules that would apply uniquely to DEs – a one year buildout activity rule, a 50% equity attribution rule, and a 25% minimum equity threshold rule – are bereft of any public interest justification. They are rather transparently designed to handcuff and disable DEs, to the direct benefit of the large incumbents.

regardless of who has control,²⁹ would completely block DEs' ability to find the large investors needed to mount a realistic new entrant challenge to large incumbents, and these proposals should be summarily rejected. Again, Incumbents mistake their own self-interest for that of the public. As noted above, from its inception, the DE program has recognized the need for DEs to align themselves with large companies if they are to provide effective competition to large, entrenched incumbents.

In viewing the Incumbents' comments as a whole, it is important to note what they do *not* say. That is, conspicuously absent from the Incumbents' comments is any review of the DE program's statutory roots or its impressive track record in introducing competition into the wireless space, nor do Incumbents acknowledge their relative dominance within the wireless industry. Rather, they elect to throw various suggestions against the FCC "comment wall," in the hope that one might stick. Much more is needed to prevail on such vital issues as are currently before the Commission in this proceeding.

* * *

The ultimate message derived from a review of the comments is simple. Positions advocated by pro-DE commenters are coincident with the public interest as articulated in Section 309(j), more than twenty years of auction history, and case precedent. Well-established public policy goals strongly favor financially robust auctions, increased competition through the dissemination of spectrum licenses to viable new entrants, and application of the "brakes" to the escalating consolidation of an already concentrated industry. Proposals advanced by the Incumbents, on the other hand, merely favor the private interests of the dominant companies,

²⁹ See Comments of AT&T, Feb. 20, 2015, at 17.


with ample downside risks for competition and consumers and no material counterbalancing factors.

IV. Conclusion.

Council Tree strongly urges the FCC to take action consonant with the views expressed herein.

Respectfully submitted,

COUNCIL TREE INVESTORS, INC.

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March 6, 2015

Its Attorneys

ATTACHMENT

Auction 97's Success Stems from New Entrant DE Competition

- 1. DE Bidders Were the Key Driver Behind the Record \$45 Billion Auction**
delivering an extra \$23 billion of proceeds to U.S. taxpayers, not costing \$3 billion
- 2. Continues a 21-Year String of FCC-Backed DE Innovation and Competition**
(think of T-Mobile as a model → started and grew as a DE)
- 3. Unsurprisingly the DE Critics Are Large Wireless Incumbents**
who dislike high price (fair value) auctions and disruptive new entrant competitors



March 6, 2015

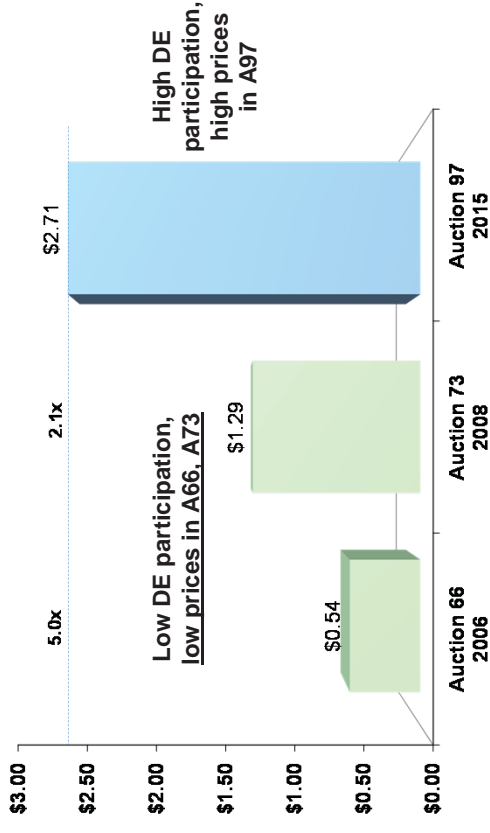
Introduction

Council Tree applauds the FCC for its record-breaking success in the \$45 billion Auction 97

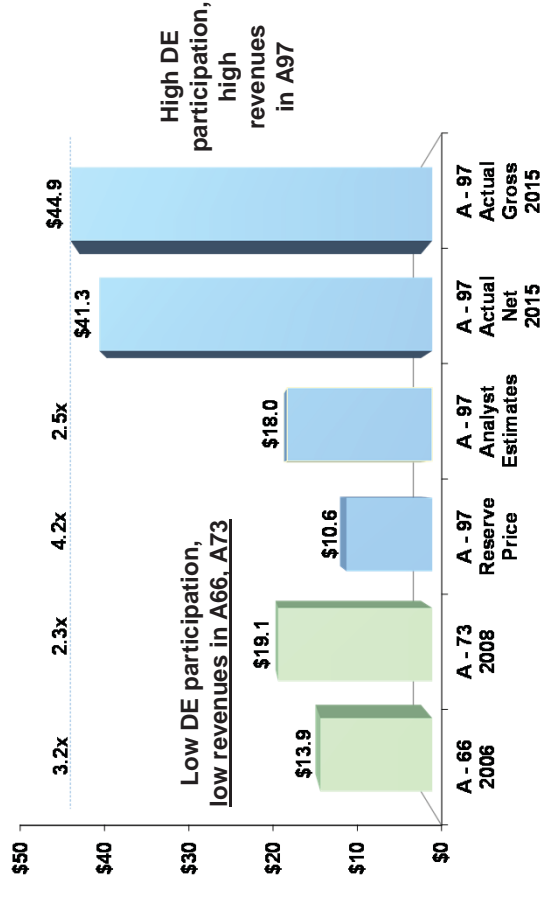
- ▶ **Auction 97 has been unanimously hailed a resounding success, exceeding estimates by 250%,**
 - \$45 billion was 2.5x the \$18 billion analyst estimates
- ▶ **Why? New Entrant competition by Designated Entities (DEs)**
 - Fifteen DEs competed aggressively
 - Acquiring \$14 billion of spectrum
 - Represented 4 of the top 7 auction winners
 - Thanks to the 25% DE bidding credit
 - Allowing DEs to compete against large incumbents in a high priced auction
 - Consistent with 21 years of DE Program success
 - DE rules unanimously reaffirmed by FCC Commissioners in July 2014 for Auction 97
 - In short, effective DE competition increased auction proceeds by an estimated \$23 billion
 - \$41 billion of net auction proceeds less \$18 billion of pre-auction estimates
- ▶ **We urge the Commission in the DE NPRM to build on this DE success, insuring in turn that the Incentive Auction succeeds and that New Entrants continue to compete in wireless**
 1. Therefore, adopt 35% DE bid credits going forward
 2. As tentatively endorsed, eliminate the AMR rule that limits DEs to 25% wholesaling & leasing
 3. Reject proposals from large incumbent wireless carriers to relegate DEs to small rural markets

Auction 97's Record Results

Record Auction 97 Pricing (paired spectrum)
(Gross \$ per MHz / POP)



Record Auction 97 Proceeds: \$45 billion
(\$ in billions)



Auction 97 prices (\$ per MHz / POP, paired spectrum) far exceeded expectations and prior auctions:

- 2.1x higher than \$1.29 / MHz / POP in A73 in 2008
- 5.0x higher than \$0.54 / MHz / POP in A66 in 2006

DE competition was responsible for driving record Auction 97 prices and proceeds

- In contrast to Auctions 66 and 73 with low DE participation, low prices and low revenues

With high auction pricing, Auction 97 proceeds far exceeded benchmarks:

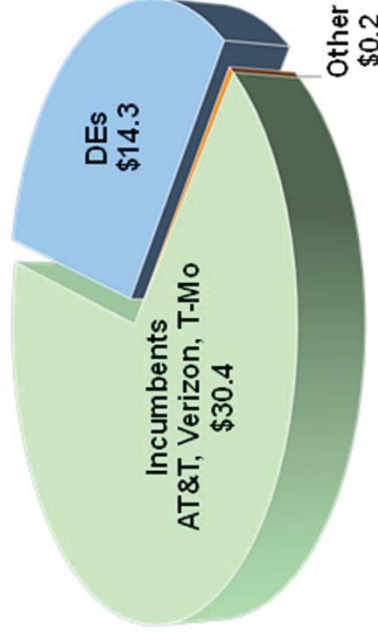
- 2.5x analyst estimates of \$18 billion**
- 4.2x the FCC's \$11 billion reserve price
- 2.3x the \$19 billion Auction 73 in 2008
- 3.2x the \$14 billion Auction 66 in 2006

(**) Commissioner Mignon Clyburn Tweet on 1/29/15: "AWS-3 auction closed. Most predicted \$18 billion; it actually hit \$44.9 billion. Great work by FCC staff, @NTIAgov and Congress!". Also Commissioner Mignon Clyburn statement on 1/29/15: "If you had conducted a poll of analysts before the start of the AWS-3 auction, the highest prediction given for its yield would not have exceeded \$18 billion."

DE Realized Greatly Improved Auction 97 Success

In Auction 97 DEs showed up in solid numbers, with 15 DEs winning licenses and bidding aggressively across the auction

**\$14.3 billion of DE Gross Winning Bids
in the \$45 Billion FCC Auction 97**
(\$ in billions, gross winning bids)



▶ **Auction 97 DE winners included:**

- Northstar – \$7.8 billion
- SNR – \$5.5 billion
- Advantage – \$0.5 billion
- 2014 AWS – \$0.4 billion
- Other DEs – \$0.1 billion

▶ **Other auction winners included:**

- AT&T – \$18.2 billion
- Verizon – \$10.4 billion
- T-Mobile – \$1.8 billion
- Others – \$0.2 billion

Auction 97 Was a Win-Win-Win....

Auction 97's beneficiaries are many, and its detractors are the few, but vocal, Incumbents

▶ Who should be happy with the auction outcome? Virtually everyone:

1. Recipients of the \$41 billion of record net proceeds

- Public Safety (FirstNet) – \$7 billion to deploy a national wireless network for first responders
- U.S. Agencies – \$5 billion to migrate to new spectrum
- Taxpayers (U.S. Treasury) - \$29 billion to reduce national debt

2. Consumers – prospects for New Entrant wireless competition: innovation, pricing

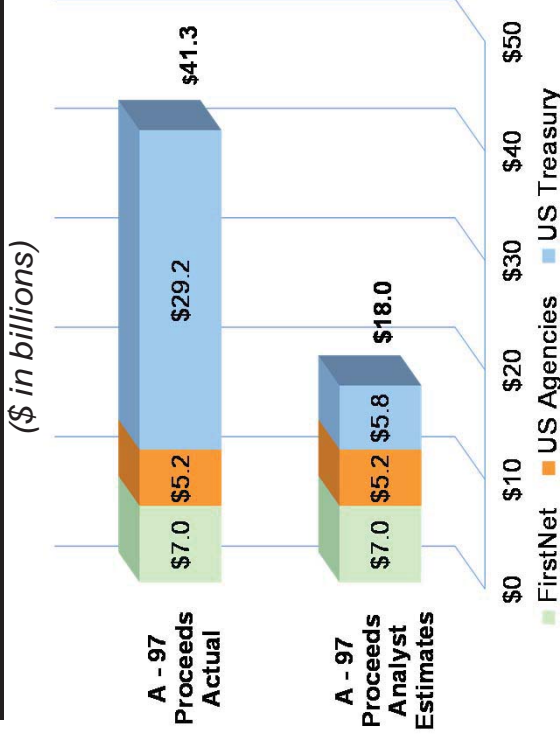
3. Incumbents – happy insofar as they acquired access to very large amounts of new spectrum resources

4. The FCC / BIA – Auction 97 creates a platform for a successful Broadcast Incentive Auction (BIA)

▶ Who is disappointed from high (fair value) auction prices and prospects for future competition?

- Large wireless incumbent carriers (the “Incumbents”)
- They would have preferred the \$18 billion incumbent-dominated auction result anticipated by analysts

Auction 97 Distribution of Net Proceeds



Recommendations for the FCC's DE NPRM

We urge the Commission to build on Auction 97 success as a model for future auction success, notably the upcoming Broadcast Incentive Auction

1. Adopt a 35% DE bidding credit

- 35% is already included in FCC rules, ready for Incentive Auction application
- To promote DE participation in light of the ever-increasing wireless industry concentration
- And in light of the increasing capital intensity of wireless and associated rising barrier to entry

2. Eliminate the 25% limit on DE wholesaling / leasing to any one party (the AMR Rule)

- This limit severely curtails DE business flexibility and funding
- Removal allows DEs the flexibility to pursue new business models with anchor tenants
 - e.g., any number of parties looking for wireless capacity that a new entrant provides

3. The Commission should reject Incumbent “poison pill” efforts to impose new restrictions on DEs as transparent and self-serving efforts to eliminate competition

- Example 1: Incumbents urge re-installing a DE 10-Year Hold Rule
 - Already proven to eliminate DE competition as demonstrated in Auctions 73 and 66
- Example 2: Incumbents propose sizing constraints on DEs
 - e.g., propose capping DE auction bidding credits at low levels
 - e.g., propose capping the size of any single investment in DEs to limit DE access to capital
 - e.g., other similar kinds of un-founded constraints on DE capitalization
 - All designed to ensure that DEs may no longer compete in mid-size and major markets

Recommendations for the FCC's DE NPRM (cont'd)

- ▶ **Our three recommendations will promote robust DE competition in future auctions**
 - Just as we saw in Auction 97
- ▶ **Robust DE participation is critical to the Incentive Auction's success**
 - Promising full, fair value auction pricing as in Auction 97
 - Promising a pathway for future new entrant wireless competitors
 - Benefiting consumers with innovative new services, lower pricing
 - Building on a long line of DE success stories such as T-Mobile, MetroPCS, Leap Wireless
- ▶ **Absent our changes, low competition, low price Auctions 66 & 73 provide a cautionary tale**
 - DE participation in both auctions languished (<4% participation vs. 32% in Auction 97)
 - Auction 66: prices were just 20% of Auction 97 (i.e., \$0.54 vs. \$2.71 / MHz / POP)
 - Auction 73: prices were just 48% of Auction 97 (i.e., \$1.29 vs. \$2.71 / MHz / POP)
 - Low DE participation and low price auctions such as these cost taxpayers billions
 - And foreclose prospective wireless competitors

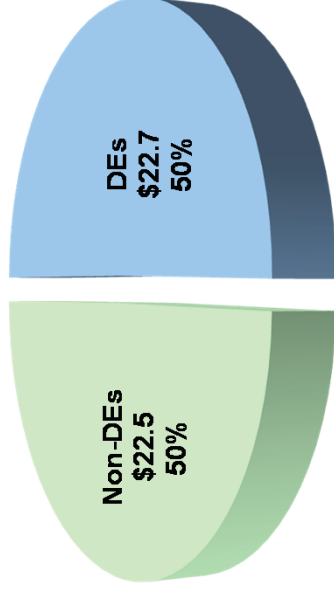
Case Study 1: An Era of DE Success Driving Competition

From 1994 – 2005 DEs were a major factor driving wireless competition, winning \$22 billion of licenses and forming numerous competitive wireless carriers, including T-Mobile

Era 1 ('94-'05): DEs buy \$22 billion of licenses

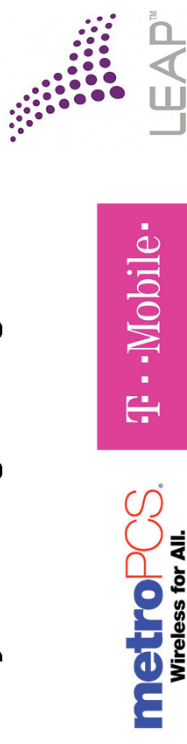
(\$ billions, net winning bids)

**\$22.7 billion in DE Winnings in
64 FCC auctions from '94 – '05
Totaling \$45.2 Billion**



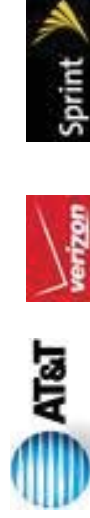
➔ DEs then built many successful carriers

- T-Mobile (Voicestream), Leap, MetroPCS and many others began and grew as DEs



- **New entrant DEs injected real competition into an industry that had been a duopoly**
 - Drove wireless innovation
 - Drove lower wireless prices
 - Competed effectively

- ▶ Incumbent carriers have in the past also commonly partnered with DEs to expand footprints:

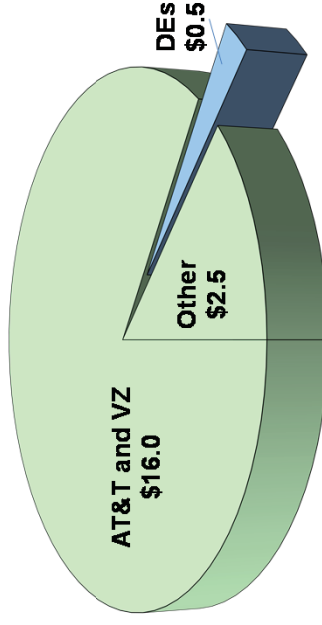


Case Study 2: Cautionary Tale of DE Failure and Low Auction Prices

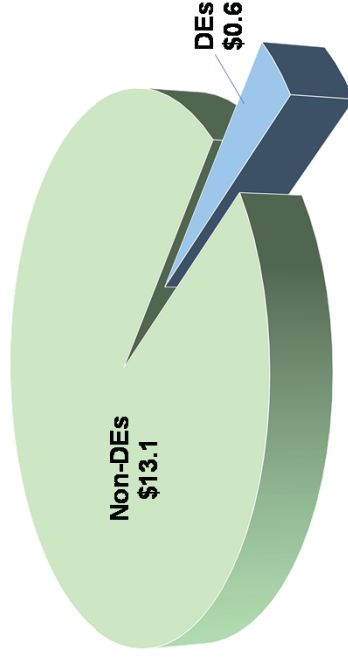
In contrast to earlier DE / auction success, 2006 – 2008 offers a cautionary tale of two major auctions which, bereft of DE participation, resulted in low prices and domination by Incumbents

Era 2 ('06-'08): DEs buy just \$1 billion of licenses as Incumbents dominated two major auctions
(\$ billions; net winning bids)

**Just \$0.5 billion of DE Winnings in the
\$19.0 Billion FCC Auction 73 (2008)**



**Just \$0.6 Billion of DE Winnings in the
\$13.7 Billion Auction 66 (2006)**



- ▶ **Why did DEs fail in these two important auctions? Because of then-new FCC restrictions on DEs**
 - Adopted by the FCC on the eve of Auction 66 in 2006
 - The severe restrictions included a “10-Year Hold Rule” for DEs and a 50% limit on wholesaling, etc.
 - In 2010, after Auction 73, a federal appellate court vacated those restrictions as unlawful
- ▶ **With DEs shut out, large Incumbents dominated and bought spectrum at very low prices**
 - Auction 73 prices were just 48% of Auction 97 – i.e., \$1.29 vs. \$2.71 / MHz / POP
 - Auction 66 prices were just 20% of Auction 97 – i.e., \$0.54 vs. \$2.71 / MHz / POP
 - **Low prices cost the U.S. Treasury and taxpayers billions of dollars in lost auction proceeds**
 - **Incumbent domination prevailed – exactly what Congress directs the FCC to avoid with §309(j)**

Rebuttal of DE Critics:

1. DEs Benefited (Did Not “Cost”) Taxpayers

In some press accounts DE critics claim DEs “cost” taxpayers \$3 billion; to the contrary, DEs were central to netting an extra \$23 billion for U.S. taxpayers

- ▶ The FCC didn’t lose \$3 billion from the DE bid credit, rather it gained \$23 billion
 - \$23 billion equals \$41b in net auction proceeds less \$18b of pre-auction estimates
- ▶ “Auction 101”: more participants, aggressively competing = higher auction pricing
 - DEs represented “more” – DE represented 4 of the top 7 auction winners
 - DEs were “aggressive” – round-by-round bidding results clearly depict DE pricing leadership
 - Auction pricing was higher – Auction 97 pricing was 2.1x Auction 73 and 5.0x Auction 66
- ▶ By contrast Auctions 66 and 73, absent meaningful DE competition, yielded low prices, low revenues and were dominated by Incumbents
 - Auction 66 and 73 DE participation was low
 - DEs winning < 4% of spectrum vs. 32% in Auction 97
 - Auction 66 and 73 prices were low
 - \$0.54 and \$1.29 / MHz / POP, respectively, vs. \$2.71 / MHz / POP (paired) in Auction 97
 - Auction 66 and 73 revenues were low
 - \$13.9 and \$19.1 billion, respectively, vs. \$42.3 billion net in Auction 97
- ▶ Simply put, DEs “paid” for themselves many times over in Auction 97
- ▶ And consumers gained wireless competition – DE innovative services and lower pricing

Rebuttal of DE Critics:

2. DEs Can Be Large in Scale

Incumbent critics now argue that DEs must be relegated to making small bids in the auction, a notion that runs contrary to Congress, FCC and wireless industry rules, intent, history and experience

- ▶ Incumbents “question” how a DE “small business” could win billions of dollars of spectrum
- 1. In 1993 Congress in §309(j) directed the FCC to promote large scale, major market competition
 - Nationwide competition sought to the then wireless duopoly
 - Specifically not limited to small markets
 - Competition in NYC being just as important as in rural Iowa
 - Congress directs the FCC to achieve this by actively managing wireless auctions
 - To disseminate licenses broadly (to NYC and rural Iowa alike)
 - And to prevent license concentration (e.g., Incumbent auction domination)
- 2. The FCC’s policy and rules have long promoted DE partnerships to access large scale capital
 - By encouraging DEs to partner with larger companies and investors
 - To access capital, operating scale and expertise
 - To effectively compete in what is a large scale, capital intensive business
- 3. With FCC support, DEs have raised capital to acquire \$35 billion of licenses over the past 21 years and become major operating carriers
 - T-Mobile, MetroPCS and Leap Wireless as shining examples
 - Bringing new entrant competition to NYC, Los Angeles, Chicago and all major U.S. markets

Rebuttal of DE Critics:

2. DEs Can Be Large in Scale (cont'd)

4. **Incumbent criticism of “large” DEs is belied by Incumbents’ own rich histories of DE partnering**
 - The Incumbents each have histories of partnering with DEs to extend their footprints
 - AT&T – \$2.9 billion DE partnership in Auction 35 in 2001 (Alaska Native Wireless)
 - Also, AT&T’s recently acquired Leap Wireless subsidiary which partnered with DEs, including in Auction 58 (\$68 million) and Auction 66 (\$365 million)
 - Verizon – \$332 million DE partnership in Auction 58 in 2005 (Vista PCS)
 - T-Mobile – \$506 million DE partnership in Auction 35 in 2001 (Cook Inlet)
 - Also, T-Mo participated alongside its DE partner and won \$482 million for T-Mo directly
 - Cingular (now AT&T) – \$2.3 billion DE partnership in Auction 35 in 2001 (Salmon PCS)
 - Sprint – \$282 million DE partnership in Auction 35 in 2001 (SVC BidCo)
5. **Finally, Incumbent criticism of DEs wholly lacks a public interest basis**
 - Such criticisms are not grounded in recognized public policy values
 - e.g., promoting competition, securing higher auctions values for public spectrum, promoting broad participation, avoiding license concentration
 - Their criticisms are narrow complaints that serve their own interest for low auction pricing
 - And foreclosure of future competition

Appendix: DE Program and §309(j)

In 1993 a bipartisan Congress directed the FCC to manage wireless spectrum auctions with the goal of promoting wireless competition – a goal as important today as it was then

- ▶ In 1993 wireless was an RBOC-dominated duopoly, an industry structure Congress rejected
 - Congress instead chose to promote wireless new entrants to compete with duopoly Incumbents
 - Seeking added competition in major markets and smaller markets alike
- ▶ Accordingly, §309(j) of the Communications Act directs the FCC to disseminate licenses broadly and prevent license concentration
 - The FCC shall ensure widespread dissemination of licenses, specifically among small businesses, including minority- and women-owned businesses, and rural telcos (DEs)
 - The FCC shall also protect against excessive concentration of licenses
 - e.g., guard against Incumbents dominating auctions via competition foreclosure premiums
- ▶ In response to §309(j) the FCC currently provides DEs with bidding discounts (e.g., 25%) to promote DE success in acquiring spectrum in FCC auctions
 - And has promoted large scale partnerships to facilitate DE access to capital
- ▶ However, the current DE Program needs additional support to fulfill the §309(j) twin mandates of widespread license dissemination and avoidance of concentration
 - Industry concentration evidenced in the Commission’s annual review of the wireless industry
 - Further supporting the increased 35% bid credit and elimination of the AMR rule
 - Together with rejecting incumbent proposals designed to eliminate large scale DE competitors

EXHIBIT 2
Illustrative FCC-Approved DE Strategic Alliances

Exhibit 2: Illustrative FCC-Approved DE Strategic Alliances

Auction #	DE Bidder	Bidding Agreement with Large Investor	Large Investor % of Equity	Licenses Won Gross (\$ millions)	
5	Cook Inlet Western Wireless PV/SS PCS, L.P.	Voicestream (now T-Mobile)	49.9%	\$90	
10	Cook Inlet Western Wireless PV/SS PCS	Voicestream (now T-Mobile)	49.9%	12	
11	Cook Inlet Western Wireless PV/SS PCS, L.P.	Voicestream (now T-Mobile)	49.9%	67	
22	Cook Inlet/Voice Stream PCS LLC	Voicestream (now T-Mobile)	49.9%	256	
35	Cook Inlet/VS GSM V PCS, LLC	Voicestream (now T-Mobile)	70.0%	506	
58	Cook Inlet/VS GSM VII PCS, LLC	Voicestream (now T-Mobile)	66.0%	256	
58	Royal Street Communications, LLC	MetroPCS (now T-Mobile)	85.0%	387	
22	ABC Wireless, L.L.C.	AT&T Wireless / Telecorp	Debt	43	
35	Alaska Native Wireless	AT&T Wireless	39.0%	2,960	
35	Salmon PCS, LLC	Cingular (now AT&T Wireless)	85.0%	2,907	
58	Edge Mobile, LLC	Cingular (now AT&T Wireless)	85.0%	184	
58	Alaska Native Broadband 1 License, LLC	Leap (now AT&T Wireless)	75.0%	68	
66	Denali Spectrum License, LLC	Leap (now AT&T Wireless)	82.5%	365	
35	SVC BidCo, L.P.	Sprint	80.0%	282	
58	Wirefree Partners III, LLC	Sprint	Lease	194	
35	ConnectBid, LLC	Nextel Spectrum (now Sprint)	49.9%	None	
58	Vista PCS, LLC	Verizon	80.0%	332	
35	Black Crow Wireless, L.P.	US Cellular	85.0%	319	
58	Carroll Wireless, LP	US Cellular	88.0%	152	
66	Barat Wireless, L.P.	US Cellular	89.0%	170	
73	King Street Wireless, L.P.	US Cellular	89.0%	401	
97	Advantage Spectrum, L.P.	US Cellular	90.0%	451	

22 illustrative FCC-approved strategic investments and alliances between DEs and wireless carriers (carriers then being regional in nature, seeking such opportunities to expand and enhance network / license footprints)

\$10,405

EXHIBIT 3
Illustrative High DE Bids

Exhibit 3: Illustrative High DE Bids

Auction		Licenses Won	
#	DE Bidder		Gross (\$ millions)
5	DCR		\$1,902
5	GW		1,413
5	BDPCS		1,165
5	Omnipoint		679
5	PCS2000		459
35	Alaska Native Wireless, L.L.C.		2,960
35	Salmon PCS, LLC		2,907
35	DCC PCS, Inc.		546
35	Cook Inlet/VS GSM V PCS, LLC		506
35	Leap Wireless International, Inc.		385
35	Black Crow Wireless, L.P.		319
58	Royal Street Communications, LLC		387
58	Vista PCS, LLC		332
66	Denali Spectrum License, LLC		365
73	King Street Wireless, L.P.		401

FCC Approved Dollar Amount	\$14,728
FCC Approved DE Bidders	15

EXHIBIT 4
Auction 97 Bidder Effect

Concrete, data-driven analysis confirms that competition from Designated Entities (DEs) in Auction 97 drove the record \$45 billion of auction revenues, \$27 billion beyond analysts' estimates of \$18 billion

- 1. Research analysts grossly underestimated auction revenues by failing to forecast DE competition**
No analyst factored in DEs acquiring \$14 billion of licenses (32% of the total)
Estimating instead an Auction 73 repeat where AT&T / VZ had bought \$16 billion (84%) at low pricing
- 2. Statistical analyses measure the impact of DE competition at \$20+ billion of additional revenues**
Putting to rest the false narrative that DEs "cost" taxpayers \$3 billion
- 3. The FCC should continue to support DEs, otherwise risking "fire sale" Incentive Auction pricing**
Where, absent competition, auction pricing falls by 50%, as confirmed by the Phoenix Center study
Increasing the likelihood of low broadcaster participation



May 14, 2015

Introduction

Multiple analytical perspectives confirm that robust competition from DEs is responsible for adding \$20+ billion to Auction 97 revenues to achieve the record, unexpected \$45 billion total

- ▶ **Background: Auction 97's \$45 billion of revenues exceeded analyst estimates by \$27 billion**
 - Pre-auction, analysts estimated \$18 billion** in auction revenues
- ▶ **Why were analyst revenue forecasts so low? None forecast robust DE participation**
 - Much less the \$14.3 billion, or 32%, that DEs won in Auction 97
- ▶ **Analysts instead anticipated that AT&T and VZ would again dominate this auction**
 - Just as in Auction 73 in 2008, where AT&T and VZ won \$16 billion of \$19 billion of licenses
 - Where DEs were mostly shut out by restrictive DE rules, rules since vacated by the courts in '10
 - In turn permitting DEs to succeed in Auction 97 with continuing FCC support
- ▶ **Analyses on the following pages affirm the \$20+ billion of revenues added from DE competition**
 - Putting to rest the assertions that DEs "cost" taxpayers \$3 billion
 - And quantifying the widely-understood Bidder Effect (i.e., more bidders = higher pricing)

(**) Commissioner Mignon Clyburn Tweet on 1/29/15: "AWS-3 auction closed. Most predicted \$18 billion; it actually hit \$44.9 billion. Great work by FCC staff, @NTIAgov and Congress!". Also Commissioner Mignon Clyburn statement on 1/29/15: "If you had conducted a poll of analysts before the start of the AWS-3 auction, the highest prediction given for its yield would not have exceeded \$18 billion."

Introduction (cont'd)

Three different analyses measure the Bidder Effect of DEs on auction revenues, ranging from \$17 billion to \$34 billion, representing an average impact of \$23 billion as summarized below

Studies of the Impact of DEs on Auction 97 Revenues

Analysis	Auction 97 Without DEs	DE Added Revenues	Total	Comments
1. Unwind Analysis	28	17	45	May 2015 analysis completed by auction experts and economists led by Dr. Gary Biglaiser
2. Phoenix Study Analysis	26	19	45	Phoenix Center April 2014 study updated for Auction 97 actual results
3. 5-Auction Regression Analysis	11	34	45	Analysis of 5 major FCC auctions 2000-2015
Average of 3 Analyses	22	23	45	
Pre-Auction Analyst Estimates (for comparison)	18	-	18	Analysts estimated \$18 billion of revenues, with no / de minimus amounts allocated to DEs

- ▶ These three analyses explain what analyst estimates missed – the Bidder Effect of DEs

Introduction (cont'd)

Robust DE participation in the Broadcast Incentive Auction (BIA) will be key to auction success

- ▶ **The Bidder Effect serves to underscore the importance of DEs to ensuring BIA auction success**
 - Where robust DE competition is necessary to combat “tacit collusion” that otherwise prevails
 - Where incumbents, absent meaningful new entrant competition, do not compete on price
 - As illustrated in Auction 73
- ▶ **For example, the Phoenix Center forecasts a 50% reduction in BIA revenues by removing just two bidders on average per license (in turn indicating the cost associated with removing DE participation)**
 - Specifically, in April 2014 the Phoenix Center calculated that:
 - If 4.08 bidders are illustratively forecast for the Incentive Auction (on average, per license)
 - Then removing 2.0 bidders reduces auction proceeds by 50% (see page 19 for detail)
 - This underscores the necessity for continuing FCC support for DE bidders as vital to BIA success
 - Where in Auction 97 there were 5.5 avg. bidders per license
 - Of which 3.2, or 58%, were DEs
 - Hence, these 3.2 avg. DE bidders per license are critical to BIA auction success, just as they were to Auction 97’s record success

Summary of the Three Analyses

The data-driven analyses below summarize the powerful impact that DE competition had in driving Auction 97 revenues via the widely understood Bidder Effect (more bidders = higher revenues)

1. Unwind Analysis of the Bidder Effect

- Data Analyzed – the Unwind Analysis measures DE bidder impact on Auction 97 by removing DE bids, on a pro forma basis, from auction data in order to derive resultant winning bids
 - Auction experts Dr. Gary Biglaiser, Ms. Georgina Martinez and Dr. Adriaan Ten Kate
- ➔ **Conclusion: DE competition added at least \$17 billion of revenues to Auction 97**
 - Put differently, absent DEs, Auction 97 would have yielded \$28 billion of revenues
 - Using conservative assumptions; actual DE Bidder Effect likely materially higher

2. 5-Auction Bidder Effect Regression Analysis

- Data Analyzed – data from the five major FCC auctions from 2000-2015 totaling \$98 billion
 - Deriving the mathematical relationship between the number of bidders per license and the resultant price; very high statistical correlation
- ➔ **Auction pricing and revenues are explained by the number of bidders per license**
 - e.g., the 5.5 avg. bidders per license in Auction 97 explains the \$45 billion in revenues
 - 3.2 of those 5.5 bidders, or 58%, were DE bidders
- ➔ **Conclusion: removing all DE bidders results in A97 revenue falling to the \$10.6b reserve**
 - Removal of DEs removes \$34 billion of revenues as incumbents decline to compete
 - Bidding the minimum reserve price necessary to clear the auction
 - Removing half of the DE bidders reduces Auction 97 revenues by \$19 billion to \$26 billion

Summary of the Three Analyses (cont'd)

3. Phoenix Center Bidder Effect Study

- Data Analyzed – analysis is based on the findings from the Phoenix Center study
 - An April 2014 white paper examining the FCC's Auction 66 to derive the mathematical relationship between the average number of bidders per license and resultant pricing
- ➔ **Phoenix Center study develops a formula for measuring the impact of the number of avg. bidders per license and the resultant impact on pricing (e.g., quantifying the Bidder Effect)**
 - We further applied the Phoenix Center's regression analysis methodology to the Auction 97 bidding data set
- ➔ **Conclusion: DE competition added \$19 billion of value to Auction 97**
 - Put differently, absent DEs, Auction 97 would have yielded \$26 billion
- **The Phoenix Center further comments on the magnitude of the Bidder Effect:**
 - “Auction theory suggests that the more bidders there are the higher auction prices are likely to be....and the estimates indicate that an increase in the number of bidders increases auction prices. This result is consistent with one core assumption of the revenue-enhancement hypothesis and auction theory more generally. Practically, the effects are large.” (emphasis added)

Detail of Analyst Forecasts for Auction 97

The table below summarizes illustrative pre-auction estimates for Auction 97 revenues

Pre-Auction Estimates of Auction 97 Revenues

(\$ in Billions)		Est. Actual		Difference	
Source of Estimate	Revenue	Revenue	\$	%	Comment
Equity Research Analyst Estimates:					
JP Morgan	13.7	44.9	31.2	228%	
UBS	12.5	44.9	32.4	259%	Range of \$10.0 - \$15.0
Barclays	16.5	44.9	28.4	172%	Range of \$14.0 - \$19.0
TMF	13.0	44.9	31.9	245%	Range of \$12.0 - \$14.0
BTIG	14.1	44.9	30.8	218%	Range of \$11.9 - \$16.4
New Street	22.0	44.9	22.9	104%	
Bank of America	20.0	44.9	24.9	125%	
Morgan Stanley	25.0	44.9	19.9	80%	Morgan Stanley poll of institutional investors
Analyst Average	17.1	44.9	27.8	163%	

Other Comparison Points:

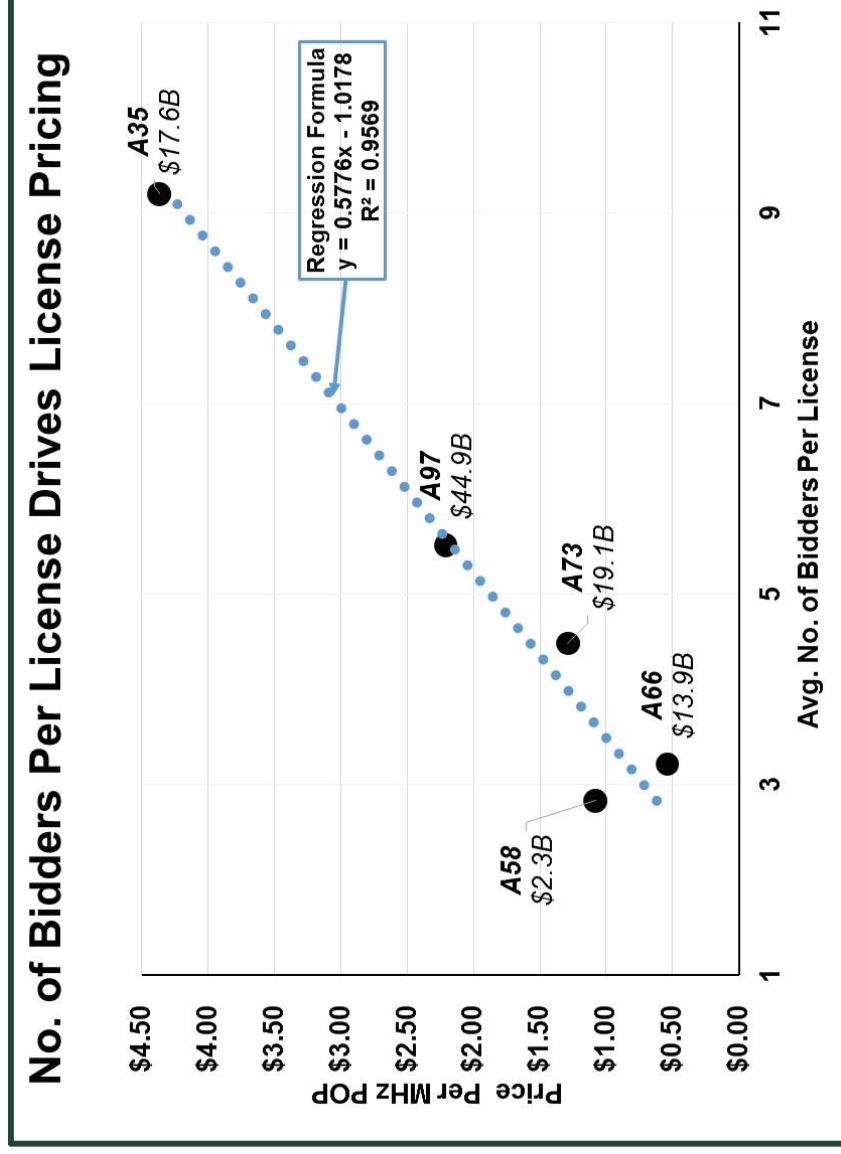
Auction Reserve Price	10.6	44.9	34.3	322%	Minimum clearing price for all Auction 97 spectrum
CBO Auction Scoring	14.2	44.9	30.7	216%	Based on estimate of \$0.70 / MHz POP
FCC Comm. Clyburn	18.0	44.9	26.9	149%	Post-auction comment referencing pre-auction estimates

Appendix A

5-Auction Bidder Effect Regression Analysis Detail

Bidder Effect Regression Summary

Below is the regression line for the last five major FCC auctions comparing average number of bidders per license vs. price per MHz POP, and showing near perfect correlation (96% R-squared)

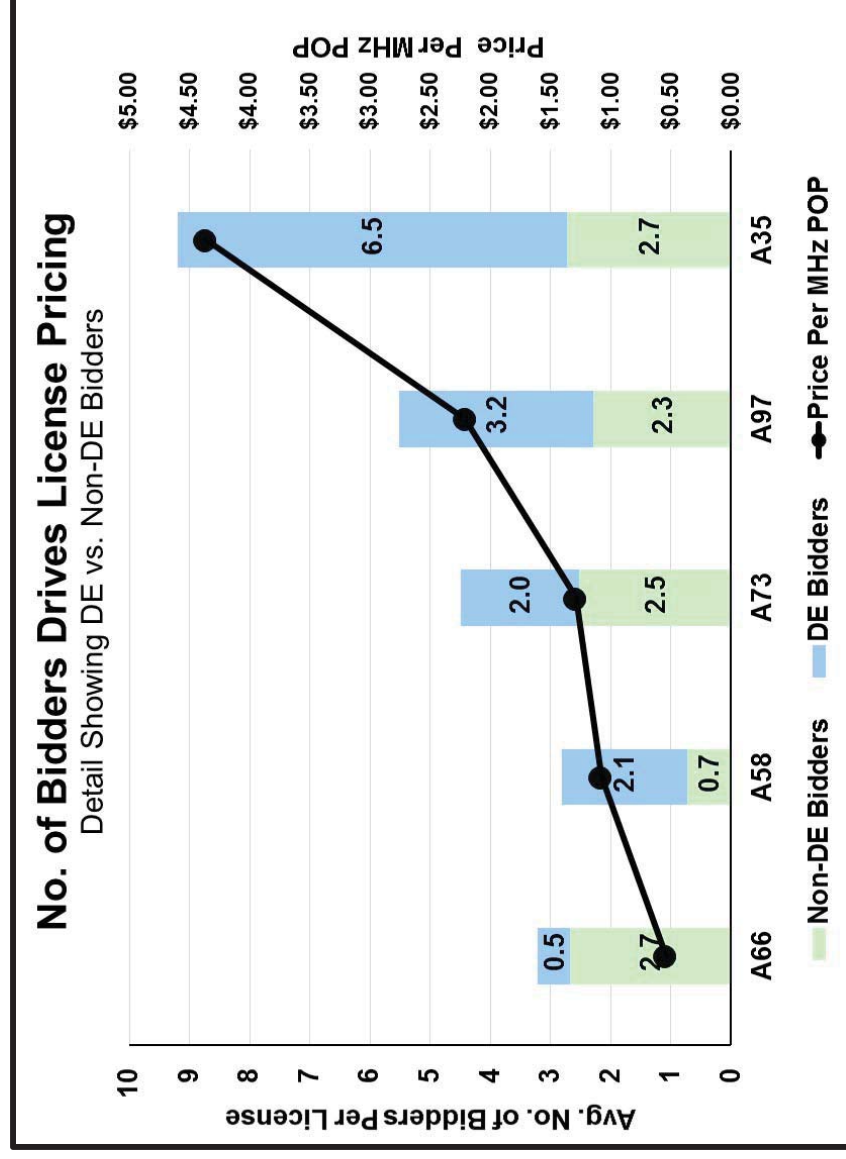


Interpreting the data:

- ▶ High # of bidders per license → high price per MHz POP (e.g., the Bidder Effect)
 - Low # of bidders per license → low price per MHz POP
- ▶ Evidence: extremely high statistical correlation with **96% R-squared**
 - Data from the FCC's five largest auctions from 2000 - 2015
 - Y [Price Per MHz POP] = $0.58 * X$ [Avg. No. of Bidders Per License] less \$1.02
- ▶ Removal of all DE bidders from Auction 97 reduces pro forma auction revenues to below the auction reserve price of \$10.6 billion — yielding a \$10.6 billion result
 - By applying the regression formula to remove 3.2 avg. DE bidders per license
 - And concluding that incumbent bidders would bid the reserve to clear the auction
- ▶ Removal of half of the DE bidders from Auction 97 reduces revenues by \$19 billion to \$26 billion

DEs Are the Key “Swing Bidders”

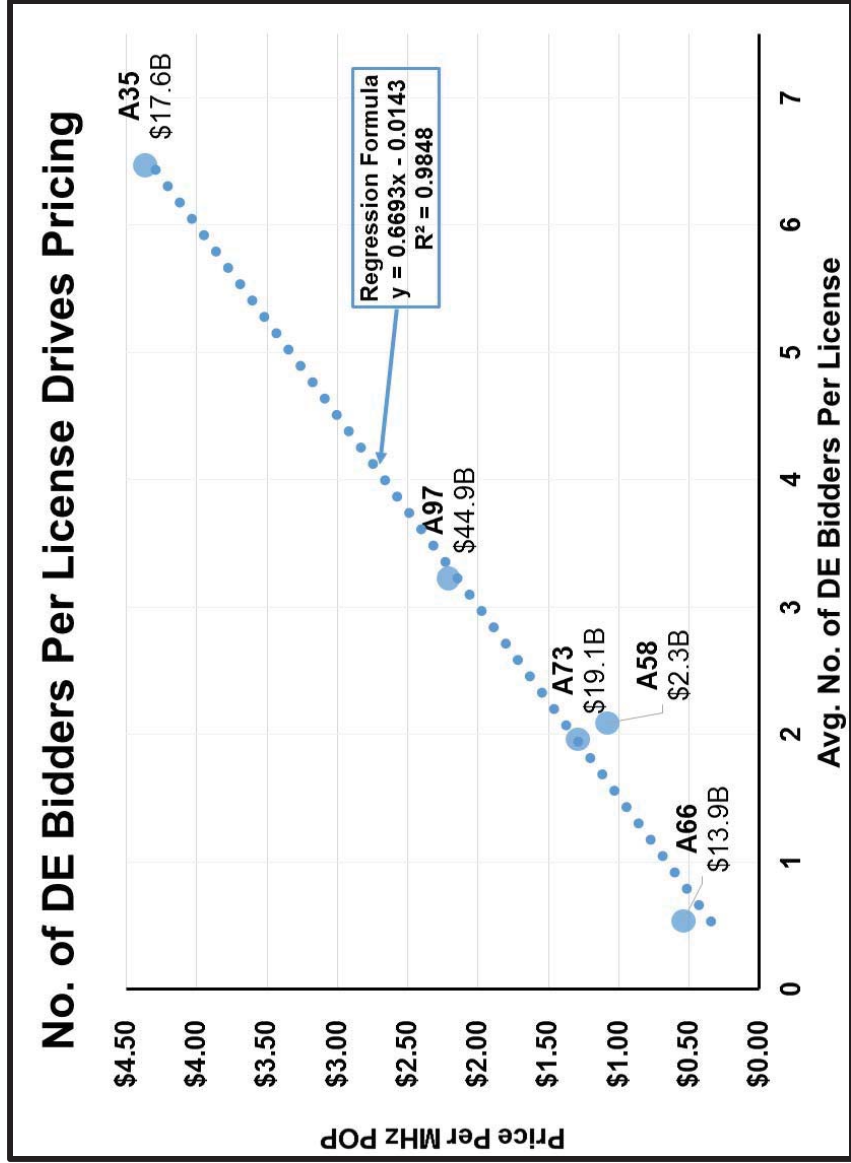
As the chart below illustrates, DEs are the “Swing Bidders” across the five significant FCC auctions from 2000-2015 totaling \$98 billion; as such, DEs are the key marginal drivers of pricing



- ▶ **Non-DE bidders in the major auctions has held steady at 2.3-2.7 / license**
 - Setting aside smaller \$2.8 billion A58
- ▶ **Making DEs the key Swing Bidders**
 - Driving marginal pricing
- ▶ **Auction 35 in 2000: record pricing thanks to record DE bidder participation**
 - Record 9.2 bidders per license
 - 6.5 DE, 2.7 non-DE
- ▶ **Auction 66 in 2006: lowest pricing, lowest level of DE participation**
 - Only 3.2 bidders (0.5 DEs, 2.7 non-DEs)
 - Reason: severe FCC restrictions imposed on DEs from 2006 until vacated by the courts in 2010
- ▶ **Auction 73 in 2008: low pricing, low DE participation – again from DE restrictions**
- ▶ **Auction 97 in 2015: >50% increase in DE bidders vs. Auction 73 as severe DE restrictions are removed, and DE competition drives record revenues**

Supporting Regression Analysis of DEs-Only

A regression analysis of DE-only bidders further confirms the Bidder Effect with a very high correlation between avg. no. of DE bidders per license and price per MHz POP (98% R-squared)

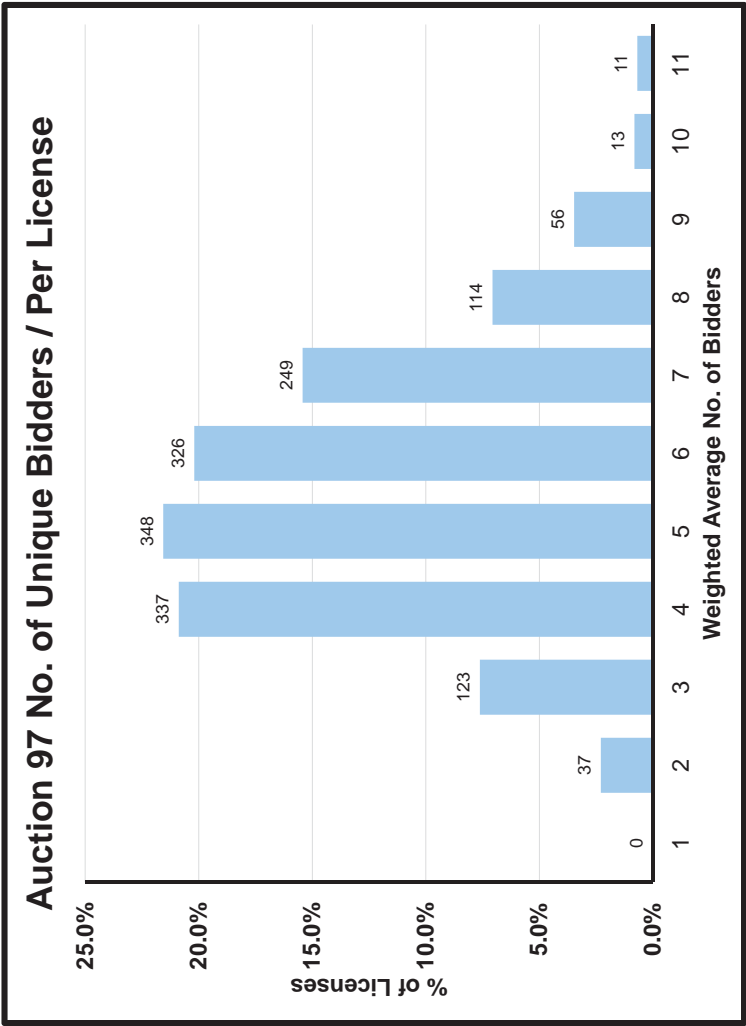


- ▶ With FCC support for DEs in Auction 97, DE bidder activity flourished
 - 3.2 avg. DE bidders / license
 - vs. 2.0 avg. DE bidders / license in Auction 73
- ▶ With robust DE competition Auction 97 yielded record revenues
- ▶ Just as would be projected from this regression analysis

Supporting Data

Below is detail showing the level of bidder activity on licenses used to determine the weighted average number of bidders per license in Auction 97

Auction 97				
(a) No. of Bidders	No. of Licenses	(b) % of Licenses	(c) = (a) * (b)	
2	37	2.29%	0.05	
3	123	7.62%	0.23	
4	337	20.88%	0.84	
5	348	21.56%	1.08	
6	326	20.20%	1.21	
7	249	15.43%	1.08	
8	114	7.06%	0.57	
9	56	3.47%	0.31	
10	13	0.81%	0.08	
11	11	0.68%	0.07	
Avg. No. of Bidders / License		100.00%	5.51	5.51



- ▶ The bidding data for each auction analyzed was sourced from the FCC’s website from the “All-Bids” Table in the “Full Information Results Files” database; for example, for Auction 97 please see: http://wireless.fcc.gov/auctions/auction_results_files.htm?id=97&type=full&setSize=0

Supporting Data (cont'd)

Below is detail used in calculating avg. no. of bidders per license for Auctions 35, 58, 66 and 73

Auction 73					Auction 66					Auction 58					Auction 35				
(a) No. of Bidders	Licenses	No. of Bidders	(b) % of Licenses	(c)=(a)*(b) Weighting	(a) No. of Bidders	Licenses	No. of Bidders	(b) % of Licenses	(c)=(a)*(b) Weighting	(a) No. of Bidders	Licenses	No. of Bidders	(b) % of Licenses	(c)=(a)*(b) Weighting	(a) No. of Bidders	Licenses	No. of Bidders	(b) % of Licenses	(c)=(a)*(b) Weighting
1	3		0.27%	0.00	1	160		14.65%	0.15	1	49		22.37%	0.22	4	4		0.95%	0.04
2	91		8.29%	0.17	2	284		26.01%	0.52	2	64		29.22%	0.58	5	10		2.37%	0.12
3	213		19.40%	0.58	3	254		23.26%	0.70	3	46		21.00%	0.63	6	38		9.00%	0.54
4	306		27.87%	1.11	4	175		16.03%	0.64	4	22		10.05%	0.40	7	52		12.32%	0.86
5	271		24.68%	1.23	5	98		8.97%	0.45	5	19		8.68%	0.43	8	67		15.88%	1.27
6	109		9.93%	0.60	6	61		5.59%	0.34	6	13		5.94%	0.36	9	76		18.01%	1.62
7	57		5.19%	0.36	7	31		2.84%	0.20	7	4		1.83%	0.13	10	57		13.51%	1.35
8	26		2.37%	0.19	8	19		1.74%	0.14	8	2		0.91%	0.07	11	48		11.37%	1.25
9	5		0.46%	0.04	9	8		0.73%	0.07						12	33		7.82%	0.94
10	3		0.27%	0.03	11	2		0.18%	0.02						13	22		5.21%	0.68
11	2		0.18%	0.02											14	6		1.42%	0.20
12	5		0.46%	0.05											15	6		1.42%	0.21
13	2		0.18%	0.02											16	1		0.24%	0.04
14	1		0.09%	0.01											17	2		0.47%	0.08
15	3		0.27%	0.04															
17	1		0.09%	0.02															
	1,098		100.00%	4.48		1,092		100.00%	3.21		219		100.00%	2.83		422		100.00%	9.20
	Avg. No. of Bidders / License			4.48		Avg. No. of Bidders / License			3.21					2.83					9.20

Appendix B

Unwind Analysis

Assessing the Impact of Removing Designated Entity Participation from Auction 97

May 13, 2015

I. Introduction and Findings

In February 2015 the Federal Communications Commission (FCC) completed its most successful auction of wireless spectrum licenses in history, with Auction 97 recording \$44.9 billion in gross winning revenues.¹ Auction 97 revenues were \$26 billion, or 135%, higher than those of the next closest FCC auction, Auction 73, completed in 2008 and generating \$19.1 billion in revenues.

Auction 97 is also notable for the competitive role played by Designated Entity (DE) bidders. 15 DE bidders acquired \$14.3 billion of licenses, or 31.8% of the auction total. Clearly DE bidders were instrumental to the FCC's auction success. This paper seeks to further quantify the competitive impact of these DE bidders on the auction outcome, perhaps providing lessons for future FCC spectrum auctions, including the upcoming Broadcast Incentive Auction.

As detailed on a step-by-step basis below, this paper concludes that, absent DE bidders, Auction 97 revenues would decline by \$17 billion, from \$44.9 billion to \$27.9 billion. As explained further, the \$17 billion decline is likely to be larger but for certain conservative assumptions that we adopted.

In addition, removal of the pool of very active DE bidders from Auction 97 would likely see the onset of a Coordination Effect from the remaining 3 – 4 large bidders who, absent DE competitors, would likely have both the incentive and opportunity to maintain lower auction pricing through market sharing and allocation. Again, we have not sought to quantify the further impact on auction revenues from the Coordination Effect associated with the removal of DE bidders, but it would likely serve to materially increase the \$17 billion of estimated DE bidder impact.

The authors are experienced in a wide range of auction and economics related matters, including developing and advising auction participants on auction structures and strategies. The team is led by Dr. Gary Biglaiser and includes:

- **Dr. Gary Biglaiser, Ph.D, Professor of Economics, University of North Carolina.** Dr. Biglaiser is expert in areas that include auctions and auction theory, industrial and information economics and game theory. His experience includes advising bidders and regulators on many spectrum and energy auctions throughout the world. He is also a former Assistant Chief Economist at the FCC and is currently a co-editor of the *RAND Journal of Economics*.
- **Ms. Georgina Martinez, Managing Director, Auction Technologies.** Ms. Martínez is a consultant with over 15 years of experience on economic and regulatory policy for the telecommunications and energy industries in the United States and abroad. She has provided end-to-end regulatory and bidding strategy support to bidders participating in spectrum and energy auctions, and auction design services to telecom regulatory agencies in the United States and around the world since 1998.

¹ Auction 97 generated \$44.9 billion of gross revenues, or \$41.3 billion of revenues net of bidding discounts awarded to Designated Entity bidders. Throughout this paper all references to auction proceeds, preliminary winning bids, minimum acceptable bids and similar references will be on a “gross” basis, prior to netting Designated Entity discounts, if any.

EXHIBIT 4: AUCTION 97 BIDDER EFFECT

- **Dr. Adriaan Ten Kate, Director at Alvarez & Marsal.** Dr. Ten Kate specializes on auction design and providing end-to-end spectrum auction support and analysis. He has been a lecturer and a Ph.D. student at the University of Chicago; his academic research and work include topics like industrial organization, mechanism design and behavioral economics.

II. The Basic Unwind Analysis as a Building Block

As a first step in determining the impact of the DE bidder participation on Auction 97, we undertake a Basic Unwind analysis. This analysis employs the methodology of removing on a pro forma basis the bids of identified DE bidders from the auction in order to predict the impact those bidders had on auction revenues.

Consistent with similar unwind analysis,² our working hypothesis for this analysis is that bidders would remain willing to place the same bids that they made in Auction 97 after eliminating DE participants from the auction. This will allow us to estimate the willingness of each bidder to pay for each license for sale. Using that willingness to pay allows us to infer the winner in the re-constructed auction as well as the alternative prices that would have been paid for each license. Therefore, this methodology enables us to quantify the losses associated with excluding DE bidders from Auction 97.

In order to construct the algorithm, we collected the following bidder information for every license sold in the AWS-3 auction:

- The highest bid submitted by each bidder.
- The round in which the highest bid was submitted.
- The Provisionally Winning Bid (PWB) and the Minimum Acceptable Bid (MAB) at said round.³
- Bidding data throughout our study is considered on a gross basis, before DE bidding discounts.

As an example of the methodology, we use the following table that contains all the relevant bidder information for the J-Block for the New York City Economic Area (EA):

Table 1

Bidder	Actual PWB (\$mm)	Round	MAB (\$mm)
AT&T Wireless Services 3 LLC	\$2,763	64	\$2,813
Northstar Wireless, LLC	\$2,713	63	\$2,763
SNR Wireless LicenseCo, LLC	\$2,613	44	\$2,663
Cellco Partnership d/b/a Verizon Wireless	\$2,363	35	\$2,413
American AWS-3 Wireless I L.L.C.	\$1,813	24	\$1,863
Bluewater Wireless, L.P.	\$478	10	\$574
T-Mobile License LLC	\$379	9	\$478
Advantage Spectrum, L.P.	\$398	9	\$478
SAAS License, LLC	\$183	5	\$220

² The Basic Unwind analysis is essentially the same methodology used by Dr. Leslie Marx in her white paper entitled “*Economic Analysis of Proposals That Would Restrict Participation in the Incentive Auction*” of September 18, 2013 and available at: <http://apps.fcc.gov/ecfs/document/view?id=7520944358>.

³ Further, if a bidder withdraws a PWB from a license, we disregard all the previous bidding for that license, and collect the information described above after the withdrawal.

EXHIBIT 4: AUCTION 97 BIDDER EFFECT

There were nine bidders for the New York J-Block. Of those nine bidders, five were DE bidders (highlighted in bold in the table). Therefore, if we removed the bids of these DE bidders then there will be four bidders remaining.

Northstar was the last bidder that dropped out of the auction for this license. The MAB of the round in which Northstar dropped out is equal to the price that AT&T paid. Therefore, if the Northstar bids are removed, the price that AT&T will pay for the New York J-Block will fall. Using the MAB from the highest losing bidder, in this case Verizon, gives us a price of \$2.4 billion for the J-Block. In this example, there is a loss of revenue of \$400 million due to the bidder exclusion.

To generalize the methodology, we apply the following rules:

1. We create a list with the relevant bidder information for each license in the auction.
2. We remove all the DE bidders from the auction.
3. The winner of a specific block will be the bidder with the highest willingness to pay for the block.
4. The price that bidder will pay will be the MAB of the round in which the highest losing bidder submitted his bid.
5. If there is no second highest bidder (i.e. only one bidder bid in the license) the license will be sold at reservation price.
6. If there are no bidders for the license, the license remains unsold.

Results of the Basic Unwind Analysis

The table below summarizes the effect of removing all of the DE bidders from the auction per the Basic Unwind analysis. We have decomposed the effects into the different blocks available in the auction:

Table 2

Block	Actual PWB (\$mm)	Actual Price / MHz POP	Basic Unwind PWB (\$mm)	Basic Unwind Price / MHz POP
A1	\$173	\$0.11	\$58	\$0.03
B1	\$2,265	\$0.70	\$354	\$0.11
G	\$7,412	\$2.30	\$5,038	\$1.61
H	\$8,447	\$2.67	\$7,133	\$2.28
I	\$8,402	\$2.61	\$7,133	\$2.28
J	\$18,201	\$2.83	\$16,115	\$2.58
TOTAL	\$44,899	\$2.15	\$35,831	\$1.76

Removing the DE bidders has an estimated impact of \$9.1 billion dollars on gross auction revenues, an effect that is highly significant. This effect remains quite substantial even when one takes into account the DE bidding discount to arrive at net revenue impact. To place this in further context, the removal of AT&T from Auction 97 would result in a loss of revenue of \$4.5 billion.

Drawbacks of the Basic Unwind Analysis

While the Basic Unwind analysis provides a simple and intuitive framework to quantify the exclusion of bidders from the auction, the estimate significantly understates the true contribution of the DE bidders to auction revenues.

The key reason for this understatement is that the licenses are substitutes among each other. The algorithm ignores the fact that bidders see different licenses as the same product, and bidders would not be willing to pay a higher price for a given license if they knew they had available a comparable license at a lower price.

Leslie Marx makes this point very succinctly:

“When I reevaluate the bids without Verizon, my methodology will predict that bidder A wins both licenses, when bidder A, who wants only one of the two licenses, might not have bid in such a way as to win both (even though prices are lower in the absence of Verizon)” (page 33, ¶(98))

Bidding behavior during the auction confirms that paired blocks for the same region were substitutes for each other. From the auction data, we can identify continuous shifting of bids between the G-H-I-Blocks by bidders. Moreover, the price per MHz POP among blocks is sufficiently similar to support this hypothesis.

Therefore, this Basic Unwind analysis measures the lowest theoretical bound of the impact of the DE bidders. The real number, taking into account real auction behaviors, is certainly much higher as we demonstrate next in the Full Unwind analysis.

III. The Full Unwind Analysis

In this section, we refine our estimates of the reduction in revenue from eliminating the DE bidders by considering the impact of substitution among the paired licenses in each bidding area. In what follows, we assume that bidders in the paired spectrum care mostly about the quantity of spectrum that they acquire and not which specific blocks they win in any given region.

The Full Unwind analysis proceeds by translating bidding behavior into the underlying demands for 10 MHz and 20 MHz blocks of paired spectrum. To illustrate the Full Unwind approach, we consider the bids in the New York licensing market area. For expositional purposes in the first phase of the explanation of the Full Unwind approach we treat the New York G-block CMA as a perfect substitute for the H and I-Block EA licenses. Subsequently, we explain how, in this Full Unwind method we aggregate the different CMAs.

The demand for 20 MHz blocks of spectrum is comprised of bidders who submitted a bid for the J –Block (20 MHz), or a joint bid for two 10 MHz blocks (H, I, or G) in the same round. In the case of the New York market, the demand for 20 MHz only contains bids in the J-Block, and no joint bids for two 10 MHz blocks, as in Table 1.

EXHIBIT 4: AUCTION 97 BIDDER EFFECT

The demand for 10 MHz blocks is made up of the highest bid submitted by every bidder on any of the H, I, and G-Block, as long as two bids for 10 MHz are not submitted in the same round (as before, this would qualify as a 20 MHz bid).

Table 3
Demand for the 20 MHz Block

Bidder	PWB (\$ mm)	Round	Block
AT&T Wireless Services 3 LLC	\$2,763	64	J
Northstar Wireless, LLC	\$2,713	63	J
SNR Wireless LicenseCo, LLC	\$2,613	44	J
Cellco Partnership d/b/a Verizon Wireless	\$2,363	35	J
American AWS-3 Wireless I L.L.C.	\$1,813	24	J
Bluewater Wireless, L.P.	\$478	10	J
T-Mobile License LLC	\$379	9	J
Advantage Spectrum, L.P.	\$398	9	J
SAAS License, LLC	\$183	5	J

Demand for 10 MHz Block

Bidder	PWB (\$ mm)	Round	Block
SNR Wireless LicenseCo, LLC	\$1,316	39	I
Northstar Wireless, LLC	\$1,316	39	I
AT&T Wireless Services 3 LLC	\$1,266	38	I
American AWS-3 Wireless	\$785	21	I
T-Mobile License LLC	\$472	14	I
Verizon Wireless	\$328	12	I
Bluewater Wireless, L.P.	\$145	7	I
SAAS License, LLC	\$132	7	H
BC4 LLC	\$102	8	I
Lynch 3G	\$102	8	G
Triad 8, LLC	\$64	6	G

The DE bids are in bold. We allocate the 50 MHz of spectrum in New York according to the following criteria:

1. The winners will be the bidders that jointly have the highest willingness to pay for 50 MHz in the New York area.
2. We will only consider a bid of 20 MHz or 10 MHz for each bidder, but not both.
3. The prices of all the 10 MHz blocks are determined by the MAB of the highest bidder for 10 MHz that did not win any spectrum.
4. If there is no highest losing bidder, the price of 10 MHz will be set at the reservation price for the H-I-Block.
5. The price of the J-Block is two times the price of the 10 MHz block, plus a 14% premium; the premium relates to the difference in price per MHz Pop between the J-Block and H-I-Blocks.
6. If there is not enough demand for 50 MHz, the blocks for which there is no demand go unsold, and the price for 10 MHz of spectrum is set at the reservation prices for the H-I-Block.

EXHIBIT 4: AUCTION 97 BIDDER EFFECT

With the rules above, if we remove the DE bidders from the New York market, the winners are determined as follows:

- Since we need at least one bid for 20 MHz, we pick the highest bid for that amount of spectrum. Hence AT&T is declared the winner. We then remove the bid of AT&T for 10 MHz.
- The next decision will be whether we should allocate another bidder 20 MHz or give each of two bidders 10 MHz. Verizon's bid for 20 MHz (\$2.3 billion) is higher than the two highest 10 MHz bids (American and T-Mobile for \$1.2 billion). Hence, in this New York example, Verizon is declared the winner of 20 MHz of spectrum.
- The next decision is which bidder to allocate the remaining 10 MHz of spectrum. The highest remaining bidder is the bid by American for \$785 million.
- Finally, the highest losing bidder for 10 MHz of spectrum is T-Mobile with a bid of \$472 million. The MAB in the round where T-Mobile drops out is \$566 million.
- The MAB for the bid of T-Mobile represents the price of 10 MHz of spectrum, so the G-, H-, and I-Blocks will be sold for \$566 million each.
- The J-Block price is two times the price of the 10 MHz block, plus a 14% premium, so it goes for \$1.2 billion (or $2.14 * \$566$ million).
- The total revenue of the New York paired spectrum is \$2.9 billion.

The Full Unwind analysis captures the fact that agents are willing to move across licenses, and in this case the value of the spectrum drops significantly with the exclusion of DE bidders.

While the above example illustrates the Full Unwind approach, it is not actually the Full Unwind algorithm that we use because we will not assume that the aggregated G-Block of an EA is necessarily a very close substitute for the H-I-Blocks.

To illustrate how we calculate the impact of the DE bidders in cases in which an EA contains multiple large CMAs, we highlight the San Francisco-Oakland Economic Area. The San Francisco EA is dominated by two large CMAs, San Jose and San Francisco. And it contains a total of eight markets: San Francisco, San Jose, Stockton, and Vallejo-Napa Salinas, Modesto, Santa Cruz, Del Norte and Mendocino. In this case, a high bid of 10 MHz of spectrum can come in two different ways:

- A bid placed on the H- or I-Block.
- A group of bidders who collectively win the eight G-Block licenses.

The table below presents the demand for the 20 MHz J-Block, 10 MHz H- and I-Blocks and 10 MHz G-Block in the San Francisco Economic Area, again highlighting in bold the to-be-excluded DE bids:

Table 4
20 MHz J-Block Demand

Bidder	PWB (\$mm)	Round	Block
Verizon Wireless	\$783	31	J
AT&T Wireless Services 3 LLC	\$733	30	J
Northstar Wireless, LLC	\$633	28	J
SNR Wireless LicenseCo, LLC	\$633	28	J
American AWS-3 Wireless I L.L.C.	\$216	13	J
T-Mobile License LLC	\$104	9	J

EXHIBIT 4: AUCTION 97 BIDDER EFFECT

10 MHz H- and I-Block Demand

Bidder	PWB (\$mm)	Round	Block
AT&T Wireless Services 3 LLC	\$376	33	I
SNR Wireless LicenseCo, LLC	\$326	32	I
Verizon Wireless	\$296	26	I
Northstar Wireless, LLC	\$247	25	I
American AWS-3 Wireless I L.L.C.	\$155	16	H
T-Mobile License LLC	\$52	9	H

10 MHz G-Block Demand

Bidder	PWB (\$mm)	Round	Block
T-Mobile License LLC	\$18	7	San Francisco
T-Mobile License LLC	\$10	11	San Jose
T-Mobile License LLC	\$13	87	Stockton
T-Mobile License LLC	\$6	77	Salinas
T-Mobile License LLC	\$9	77	Modesto
T-Mobile License LLC	\$2	78	Santa Cruz
T-Mobile License LLC	\$0	43	Del Norte
T-Mobile License LLC	\$1	51	Mendocino
T-Mobile License LLC	\$4	20	Napa

The analysis of the San Francisco area follows a similar approach as in New York:

- In the J-Block, the two highest bids were not DEs.
- Excluding DE bidders, the highest losing bidder for the H-and I-Blocks is T-Mobile with a bid of \$52 million.
- The highest bidding, non-DE coalition for the G-Block is again T-Mobile. For each of the CMAs of the San Francisco area, the sum of all the highest bids is equal to \$64 million.

The price for 10 MHz will be sum of the Minimum Acceptable Bids for the round in which each of the eight G-Block bids was placed. The sum is equal to \$70 million. Hence, the price for 10 MHz of spectrum is \$70 million. The price for 20 MHz is twice the price of the 10 MHz block, plus a 14% premium, for a total price of \$160 million. The 14% premium reflects the average difference in the auction between the J-Block and the H- and I-Blocks. The entire area goes for \$370 million.

The Full Unwind Methodology

Once we have considered the interaction of the G-block the rules of the Full Unwind Analysis are as follows:

1. The winners will be the bidders that jointly have the highest willingness to pay for 50 MHz in the area.
2. Each bidder is only allowed to have a winning bid from either the 10 or 20 MHz blocks.
3. A bidder is allowed to have multiple bids from the G-Block.
4. A bidder with a winning bid for 10 MHz or 20 MHz will not be considered for bidding coalitions in the G-Block.

EXHIBIT 4: AUCTION 97 BIDDER EFFECT

5. The price of 10 MHz of spectrum will be determined by the MAB of the highest losing bidder or the highest coalition of bids that constitute 10 MHz of spectrum. That is, the prices are determined by the highest bidders for 10 MHz that didn't win any spectrum.
6. If there is no highest losing bidder, the price of 10 MHz of spectrum will be the reservation price for the H-I-Block.
7. There must be at least one bid for 20 MHz in the winning bidders (since the J-Block cannot be divided).
8. There can be at most one coalition of bidders from the G-block in the winning bidders (since the H-I-Blocks cannot be divided).
9. If there is not enough demand for 50 MHz of spectrum, the price for 10 MHz is set at the reservation prices for the H-I-Block.
10. The price of the J-Block is two times the price of the 10 MHz block, plus a 14% premium.
11. We apply the simple unwind analysis methodology to the A1-B1 blocks.

The last point completes the analysis for the full spectrum. Since we can't conclude that there is a significant degree of substitution between blocks A1 and B1 from the auction, we will apply the simple unwind method for these blocks.

Results of the Full Unwind Analysis

Removing all DE bidders from Auction 97 results, pursuant to the Full Unwind analysis, reduces Auction 97 revenues to \$27.8 billion. This indicates a loss of approximately \$17 billion in gross auction revenues associated with removing DE bidders from Auction 97. After consideration of the DE bidding credit discount the loss totals approximately \$14 billion on a net revenue basis.

In the examples above, the bids with highest value were consistently J-Block bids. This is something that occurs frequently in the algorithm. Most of the arrangement of the spectrum, pro forma for the Full Unwind, is a 20-20-10 split of the spectrum among the major carriers. If we restricted the algorithm to only allow one J-Block bid per area the value of the spectrum when removing all DE bidders declines precipitously to \$7.3 billion. The rationale for heading in this direction is that many of the bidders who indicated an interest in the J-Block for 20 MHz may in fact have not had an interest in 20 MHz if it was split into two 10 MHz blocks; in auction theory, this is called the exposure problem – a circumstance in which a bidder would prefer to accept just 10 MHz. The reality is somewhere in between, leaving the true impact of removing all DE bidders in all likelihood somewhere materially above the \$17 billion indicated in the Full Unwind analysis.

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Appendix C

Phoenix Center Study

April 2014 Study As Background

The Phoenix Center study quantifies the Bidder Effect, providing the tools to analyze the impact that DEs had on Auction 97 (e.g., DEs added \$19 billion of revenues, as per following pages)

- ▶ **The Phoenix Center study is a data-driven white paper**
 - April, 2014 publication by the Phoenix Center for Advanced Legal & Economic Public Policies
 - “Will Bidder Exclusion Lead to Higher Auction Revenue? – A Preview of the Evidence” by George S. Ford, PhD and Lawrence K. Spiwak, J.D.
 - Please see: <http://www.phoenix-center.org/PolicyBulletin/PCPB34Final.pdf>
- ▶ **The study utilizes Auction 66 data to quantify the Bidder Effect**
 - Using comprehensive regression analysis, the Phoenix Study developed the following table quantifying the Bidder Effect

Table 2. The Bidder Effect		
Bidder Count	Increase in Price from Additional Bidder	Share of Licenses
1	...	13.40%
2	140.10%	26.10%
3	52.80%	23.30%
4	29.80%	16.40%
5	19.70%	9.20%
6	14.10%	5.40%
7	10.70%	2.90%
8	8.40%	1.80%
9	6.70%	0.80%
10	5.50%	0.20%

Interpreting the table:

- ▶ If the average number of bidders on a license is two, then adding a third bidder adds 52.8% to the price
- ▶ If the average number of bidders on a license is three, then adding a fourth adds 29.8% to the price
- ▶ Conversely, if there are four bidders, then removing one reduces the price by 22.96% (i.e., $1/1.2980 - 1$)

April 2014 Methodology Applied to Auction 97

With the assistance of Dr. Biglaiser and his team of experts (see Appendix B) we applied the Phoenix Center April 2014 methodology to Auction 97 results per below

- ▶ **Step 1: we applied the Phoenix Center regression algorithm to Auction 97 bidding data**
 - In order to derive an updated “Table 2. The Bidder Effect” summary per below for Auction 97

Table 2. The Bidder Effect		
Bidder Count	Increase in Price from Additional Bidder	Share of Licenses
1	...	
2	111.7%	2.3%
3	37.9%	7.6%
4	19.1%	20.9%
5	11.1%	21.6%
6	6.9%	20.2%
7	4.4%	15.4%
8	2.7%	7.1%
9	1.6%	3.5%
10	0.8%	0.8%
11	0.2%	0.7%

- ▶ **Step 2: we then used the updated Table 2 to gauge the impact of removing DEs in Auction 97**
 - There were 5.51 bidders per license in Auction 97 (3.21 DEs, 2.30 non-DEs)
 - Removing all DEs reduces the average bidders per license to 2.30 (i.e., 5.51 – 3.21)
- ▶ **Result: Auction 97 would have yielded \$26.4 billion of proceeds absent DE participation**
 - A reduction of \$19 billion
 - See next page for interpolation details

April 2014 Methodology Applied to Auction 97 (cont'd)

Auction 97 Revenues Pro Forma for Removing DE Bidders by Applying Table 2

		Increase in Price from Additional Bidder	Bidders	Implied A97 Proceeds	Notes
Bidder Count					
From: To:					
1.00	1.00	--	1.00	11.2	
2.00	2.00	111.70%	2.00	23.8	
2.00	2.29	10.99%	2.29	26.4	A97 Pro Forma DE Bidder Removal: removal of 3.22 avg. DE bidders / license; Interpolation between 2.00 and 3.00 bidders @ 2.29 remaining bidders
2.00	3.00	37.90%	3.00	32.8	
3.00	4.00	19.10%	4.00	39.0	
4.00	5.00	11.10%	5.00	43.4	
5.00	5.51	3.52%	5.51	44.9	A97 Actual Results: includes 5.51 bidders (3.22 DE, 2.29 Non-DE) Interpolation between 5.00 and 6.00 bidders @ 5.51 bidders
5.00	6.00	6.90%	6.00	46.4	

Phoenix Analysis Showing 50% BIA Revenue Impact with Bidder Removal

The Phoenix Center study also forecasts that a roughly 50% reduction in the bidders in the Broadcast Incentive Auction will result in a 50% decline in BIA revenues

- ▶ Specifically, The Phoenix Center study forecasts that in the upcoming broadcast incentive auction (BIA), if one were expecting 4.08 bidders and eliminated 2.0 of those bidders from the auction, then the expected auction proceeds would decline by 50% as per their Table 2
 - “In Auction 66, the average number of BIA bidders was 4.08 for the BEA licenses. Based on the figures in Table 2, removing two bidders from the incentive auction would be expected to have an enormous effect on revenues (reducing auction proceeds by about 50%), other things constant.” (emphasis added) (see page 11 of the Phoenix Center study)
 - **As DEs accounted for 58% of the avg. bidders per license in Auction 97, this serves to underscore the importance of robust DE competition to the success of the BIA (and future auctions)**
 - And the key to promoting competition and avoiding fire-sale pricing in the BIA
- ▶ **The Phoenix Center further comments on the magnitude of the Bidder Effect:**
 - “Auction theory suggests that the more bidders there are the higher auction prices are likely to be....and the estimates indicate that an increase in the number of bidders increases auction prices. This result is consistent with one core assumption of the revenue-enhancement hypothesis and auction theory more generally. Practically, the effects are large.” (emphasis added) (see page 11 of the Phoenix Center study)